Transformational Learning for Intelligence Professionals

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This article presents the findings and implications of a small qualitative study meant to assist educators and others charged with developing the IC workforce. I wanted to explore how NIU students make meaning when they arrive at NIU and to understand how that evolves during their time as full-time students.

The National Intelligence University (NIU) is a unique Intelligence Community institution that offers masters' and bachelors' degrees in intelligence. Students directly apply their educations to their work in protecting the United States and our nation's interests abroad. Given the nature of their work, intelligence professionals, including NIU students, should be able to think autonomously and adaptively. As they do, they must adhere to rigorous methodical requirements. Intelligence professionals need both concrete and abstract thinking abilities.

At the same time, the IC has an ongoing need to expand the perspectives of intelligence professionals to keep up with changing, interconnected global security conditions while meeting the demands of laws, rules, and procedures.[1] Abstract, adaptive thinking is, however, a different way of understanding than concrete, rule-based thinking. NIU offers educational opportunities intended to expand the ability of intelligence professionals in both of these abstract and concrete forms.

This article presents the findings and implications of a small qualitative study meant to assist educators and others charged with developing the IC workforce. I wanted to explore how NIU students make meaning when they arrive at NIU and to understand how that evolves during their time as full-time students. I

expected students to show strength in mastering information and requirements from external sources of authority (i.e., the standardized approaches to intelligence work), which is a goal of NIU programs.

As an educator, I also expected to see students show growth in their ability to make meaning autonomously, or what some educators refer to as self-authoring thinking. In other words, are the students thinking on their own? Although the sample size is small, the findings indicate more concrete, rule-based thinking than independent, abstract thinking among the intelligence professionals in the study. Additional research and larger sample sizes would help validate the findings and potentially yield improvements in performance.

Transformative Growth for Intelligence Professionals

Before diving into the results of my study, a short orientation on how adults learn and the jargon of learning might be helpful. I approached the topic from the perspective of adult learning theories, specifically a family of theory called transformational learning theory. Transformational learning theories pertain to how adults understand the world around them, how they learn, and how they grow.[2] Transformational learning begins with the belief that adults interpret the world around them

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through mental frameworks composed of their experiences, beliefs, and assumptions.[3]

Intelligence practitioners might recognize echoes of Richards Heuer's seminal book, *Psychology of Intelligence Analysis*, in which he observed,

> *Training of intelligence analysts generally means instruction in organizational procedures, methodological techniques, or substantive topics. More training time should be devoted to the mental act of thinking or analyzing. It is simply assumed, incorrectly, that analysts know how to analyze.[4]*

In practical terms, individuals experience transformational learning when their mental frameworks expand. They incorporate divergent ideas or perspectives into an enlarged mental framework, becoming able to see or understand a situation in new ways.[5] They gain additional paradigms or mental models from which to consider a situation, and an expanded ability to recognize that the "truth" can be different depending on the way one looks at it.[6] These expansions represent developmental growth.

IC Context

In the IC, we use terms like critical thinking, advanced tradecraft, and sophisticated analysis to describe what learning specialists would characterize as moving from primarily concrete, rule-based ways of understanding toward more conceptual,

abstract, adaptive, and autonomous ways of understanding.[7] This understanding gained from interpreting the world through one's mental frameworks is called "meaning-making" in transformational learning theory. Developmental growth may take an individual from making meaning outside the self, through the rules or beliefs of others, and toward meaning making inside the self, adaptively and autonomously.[8] IC terms like critical thinking, advanced tradecraft, or sophisticated analysis reflect this kind of autonomous thinking.

National security issues are shaped by multiple interdependent factors, requiring intelligence professionals to be able to reassess their assumptions and shift perspectives.[9] Adaptive thinking abilities can be enhanced through transformational learning.

Intelligence literature points out many requirements of intelligence work that call for the expanding frameworks and mental adaptations brought on by transformations. Objectivity and critical thinking are important for intelligence analysis, as is an ability to question one's assumptions.[10] Most importantly, intelligence professionals face more complexity in security issues than they did in the past; their ways of knowing and understanding also need to change.[11]

Research Methods

In my study, I sought to compare students' ways of making meaning when they arrived at NIU and at a later point in the academic year. A

questionnaire collected short answers to questions related to the students and their workplaces that were designed to draw out indications of how students made meaning:

> *Q1. In your view and experience, what is intelligence analysis?*
>
> *Q2. What is the purpose of leadership in your organization, and what do leaders do?*
>
> *Q3. How does your work contribute to the intelligence community/national security/US interests?*
>
> *Q4. What are the ways you learn things that help you in your work?*
>
> *Q5. What do you hope to gain from your time at NIU?*

Approximately 45 students received questionnaires in the first two weeks of classes in the fall (*Time 1*). The students were adults approximately 25–55 years of age who worked in the IC or in intelligence-related roles in the US military. The responses were submitted anonymously and did not include demographic information in order to protect identity and privacy.[12]

Twenty-one students returned completed questionnaires (*Time 1*).[13] Four students returned follow-up questionnaires in the spring (*Time 2*), after approximately eight months of in-person, practice-oriented education. The *Time 2* questionnaires asked the same first four questions, as well as asking if students saw anything in new ways, and what the NIU experience had meant in their lives. The findings provide detailed analysis of

students' meaning-making on arrival at NIU and limited insights regarding changes over time.

Textual Analysis

The content of the short answers was first reviewed for wording and content; phrases received labels indicating what they mentioned.[14] Many labels repeated across the various participants' answers. For example, many answers referred to the mission of their organization or of national security. These were labeled "Mission." Others referred to processes intelligence work follows; these were labeled "Attention to process."

The next step in analysis was to determine more about what the respondents meant with the phrases they used. Did they mention an active role they had in meeting the mission, or was the mission a force that existed outside themselves? Did they indicate individuals' or groups' thinking or meaning-making was part of intelligence analysis, leadership, their work, or their own learning? Or did they primarily describe these activities as responsive to decisions and thoughts of other people, outside of the individuals performing them?

These codes and their meaning provided a basis for understanding whether respondents understood their work world through an outside authority source (informational meaning-making), through others (socialized), or within themselves (self-authoring).[15]

Ways of Knowing

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and self-authoring. These categories guided the data analysis.[16] I looked for indications of these ways of making-meaning within the responses.

Instrumental: Understanding Comes From Outside the Self

Thinking is concrete, follows rules or steps; prefers existing processes over new ones; a choice is either right or wrong; decisions are based on knowledge, and knowledge comes from appropriate authorities; expertise is based on knowing information; sees situations as competitive, as good or bad for one's interests and goals; accepts one perspective at a time, rather than recognizing multiple possible views at the same time; decisions may seem unsympathetic, not attuned to others.

Socialized: Meaning Is Made Through Other People

Decisions are based on the prevailing norms, such as "This is how we do things here"; beliefs are based on others' expectations; needs to see the self as part of the group; disagreement between people is difficult, seen as a threat; can sympathize with others' perspectives; can be reflective.

Self-Authoring: Internalized values and beliefs guide the thinking

Recognizes knowledge as situational, contextual; sees a situation as having various potentialities; accepts differing views as normal; may be able to assess own assumptions; can reflect on oneself within a situation; can integrate ideas and paradigms.

My analysis of the responses showed a predominant pattern toward respondents seeing their work as a

piece or step within larger systems and processes. That larger system or process is expressed impersonally: something that gets done but we do not see who does it. Additionally, the responses were more attentive to handling information than to thinking about it. This indicates the respondent's understanding during Time I best fit the Instrumental way of knowing, with meaning coming from outside the self.

Assessing the Data

I broke the data into three categories. First is a brief summary of the codes and locus of meaning-making across all *Time 1* questionnaires. Second is a breakdown by each question (at *Time 1*). The third area of discussion addresses trends across individual respondents. This includes assessment of the four who filled out Time 2 questionnaires, and changes to their meaning-making.

The 21 students sampled at *Time 1* reflected a tendency toward instrumental ways of knowing and external meaning-making when they arrived at NIU.[17] In other words, their answers focused on the system they were a part of and its functions, missions, and requirements. The most frequent label (or code) applied to portions of text was "Attention to Process," with "Mission" in second place. Two other frequent codes were similar in placing the respondent inside a larger effort, "Contribute to Enterprise" and "Self as part of large system." Codes indicating autonomous thinking were infrequent (such as referring to insight, ambiguity, synthesis or

The process of analysis actually involves both breaking the issue apart (analysis) and bringing factors together (synthesis), and requires intellectual activity.

integration of ideas, interpretation, or empowerment).

Breakdown by Question

Responses at *Time 1* demonstrated a firm foundation in following an external authority, seeing the self as part of a large enterprise, and working toward a mission or goals (instrumental ways of knowing).[18] However, participants' sense for learning and what they wanted from NIU reflected more socialized meaning-making. Students learned and understood through classmates, peers, faculty, or other social interactions—as well as from experiential, hands-on learning.

Intelligence Analysis

Q1 responses described analysis as physical steps or processes involved in handling data or information, rather than as thinking performed by people. Responses barely touched on the role of people, interpretation, understanding, or integrating feedback.

Leadership

Q2 responses focused on the actions leaders take within the organization's structure, guiding and directing subordinates toward the mission. None of the answers indicated leaders had autonomy, and few responses associated leadership with enabling subordinates' autonomy.

Work

Q3 responses tended to focus on concrete aspects of the work, such as outcomes, processes, responsibilities or information processing. Two thirds of participants described their indirect impact within the system, and one

third indicated they had a direct impact or some autonomous thinking.

Learning and NIU

Q4 and Q5 indicated concrete ways of knowing, but also something additional: interest in learning through experiences, through other people (discussion, networking and collaboration), as well as value for individual learning through reading or writing. Generally participants indicated a tendency toward socialized knowing when it came to their own learning.

Breakdown by Individuals

The answers of 14 respondents indicated primarily instrumental knowing, but six of them also had a tendency toward making meaning through others (socialized knowing). Four respondents indicated primarily socialized knowing. Three respondents demonstrated noticeable attention to independent or autonomous thinking, though only one of the three appeared to favor that as a primary way of knowing.

Demonstrating Growth

Four respondents filled out the questionnaires at *Time 2*; all demonstrated expanded perspectives and developmental growth. Responses to Q1 and Q2 reflected that all respondents began Time I with concrete, rule or step-based, external authority (instrumental) meaning-making regarding intelligence analysis and leadership. All had moved more toward socialized meaning-making at *Time 2*, with increased involvement of people in the processes, more attention to context, and some recognition of

leaders and others having autonomous thoughts.

The responses for Q3, regarding work roles, also reflected primarily instrumental ways of knowing at *Time 1*, with most attention toward inanimate aspects of work or requirements. All four respondents at *Time 2* reflected some growth toward abstract thinking. Three demonstrated increased socially situated meaning-making, and one indicated increased sensitivity to context.

Responses to Q4 (learning) at *Time 1* were primarily instrumental for three respondents, and the fourth indicated socialized meaning-making. Three indicated greater appreciation at *Time 2* for elements of socialized meaning-making (appreciation for context, learning with or through others, or experiential learning.)

Q5 at *Time 1* asked respondents what they hoped to gain while at NIU. One *Time 1* response was primarily instrumental, one was between instrumental and socialized, and two indicated socialized meaning-making. Two *Time 2* questions followed up in this area: "Do you see anything in new ways after your time at NIU?" and "What has your NIU experience meant in your life?"

The *Time 2* responses indicated all respondents increased their appreciation for others' perspectives. The respondent who had an instrumental answer at Time I seemed to have gained unexpectedly from networking and learning from others' perspectives. One, who had a socialized response at *Time 1*, noted at *Time 2* an increase in being reflective and collaborative, and increased autonomy of meaning-making.

Initial Focus on Process

The *Time 1* answers to Q1–Q3 predominantly focused on systems, processes, and mission. They only minimally reflected the presence of people and individual meaning-making, although the answers were describing work done by individuals, requiring thinking. This is true for the respondents' work as well as the leaders they described.

Respondents demonstrated an interest in socialized meaning-making in their own learning and educational desires. This suggests respondents may have a general preference or tendency toward socialized meaning-making, but it is not apparent in most answers about intelligence analysis, leadership, or their own work. Indications of self-authoring meaning-making were rare across all questions. Four respondents at *Time 2* did indicate developmental growth toward appreciating and incorporating more perspectives and contextual considerations in their thinking.

The questionnaires allowed for a spectrum of answers ranging from concrete to abstract or philosophical. The questionnaires also invited respondents' own views and their first-person experiences. Despite these opportunities, respondents tended to address inanimate processes and positions within a system, mission, or enterprise. These intelligence professionals subordinated people to the core processes and requirements of the organization. This is important for ensuring compliance, but counter-productive for taking on complex, changeable security challenges.

Respondents' *Time 1* answers regarding intelligence analysis, leadership, and their own work (Q1–Q3)

More than half of respondents expressed they learn through workplace experiences, with a slight favor for informal or everyday situations compared to intentional instructional settings.

reflect concrete, system-focused (instrumental) meaning-making.[19] In other words, the vast IC enterprise was making meaning for them. The *Time 1* responses about respondents' own learning and educational goals (Q4 and Q5) indicated a tendency toward discursive and experiential meaning-making. Discussions, and relationships with peers from different agencies, were significant for many students' development as professionals. This difference may indicate respondents personally tend toward socialized meaning-making, but their understanding of work roles draws more from instrumental meaning-making patterns.

With Experience, More Focus on People

The *Time 2* answers included more mentions of people, of leaders' roles in developing the workforce, and recognition of the value of learning others' views. Although small in number, the *Time 2* responses gave a larger role to individual thinking and meaning-making than the *Time 1* responses. An NIU education invites students to consider various possible interpretations and perspectives. The modest shift from *Time 1* to *Time 2* supports the expectation of this study that students grow at NIU. The surprise for this researcher was in how instrumental the responses were when students arrived, and the overall absence of responses reflecting autonomous thinking.

Conclusion

This study highlights a fundamental paradox in national intelligence. Intelligence professionals are expected to produce amazing feats of accurate, well-informed assessment. Yet my research suggests respondents did not feel invited to truly think on their own at the beginning of the academic year. They presented limited indications of autonomous or internalized meaning-making.

The self-authoring ways of making meaning are needed for adaptive thinking and addressing complex challenges. These patterns could potentially have relevance to intelligence professionals beyond the individuals sampled here. If they do, they present a challenge at the enterprise and organizational levels, and should be cause for concern.

Two organizational-level recommendations offer a starting point for change: one relates to workforce development, the other to leadership.

Developmental Culture

Intelligence organizations should cultivate a developmental culture, providing ongoing opportunities for meaningful discourse (discussion, collaboration, teamwork) across all levels. Workplaces must intentionally cultivate environments and cultures inviting to discourse and sharing of ideas.

Some commercial and nonprofit organizations have adopted an orientation called Deliberately Developmental Organizations.[20]

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They feature regular, even scheduled, opportunities for discourse among employees, as a core part of their work-life and professional development. Intelligence organizations need to increase their attention to development to keep pace with the security challenges they address.

Leadership

Leadership beliefs and practices are inherently connected to workforce development. The findings suggest that top-down leadership is alive and well in US intelligence organizations. The data from this study heavily feature what I refer to as "one-way arrows": communication from a designated role-holder toward those the role-holder has identified as needing the message.

The *Time 1* responses about leadership represent leaders as almost mechanistic conveyors of mission requirements to the workforce. The locus of decisionmaking rests primarily with the enterprise itself; respondents refer to very little autonomous thought by supervisors or the workforce. One-directional flows prevent organizations from learning, either institutionally or from their members' experiences. Traditional organizational models do not allow for adaptation.[21] Knowledge work calls for bottom-up flows of awareness and sharing.[22]

Intelligence organizations must train, educate, and structure themselves to move beyond the traditional mechanistic views of leaders as people who occupy high-level positions and implement the will of the organization. Leadership is a way of being and thinking, not a position one holds. All organizational members, at every level, must feel they have a voice. And all should be made to feel they have a responsibility for thinking critically. National intelligence requires each person to contribute their knowledge, skills, and ability to the larger effort and for organizations to leverage them effectively.

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1. Bob DeGraaff, "Intelligence and Intelligence Studies: Time for a Divorce," *Romanian Intelligence Studies Review* 21 (2019): 7–30; Josh Kerbel, "The Complexity Challenge: The US Government's Struggle to Keep Up with the Times," *National Interest* (August 26, 2015), https://nationalinterest.org/feature/the-us-intelligence-communitys-creativity-challenge-11451.

2. Chad Hoggan, "Transformative Learning as a Metatheory: Definition, Criteria, and Typology," *Adult Education Quarterly* 66, 1 (2016): 57–75.

3. Matthias Finger and José Manuel Asún, *Adult Education at the Crossroads: Learning Our Way Out* (Zed Books, 2001); Jack Mezirow, "Learning to Think Like an Adult: Core Concepts of Transformation Theory," in *Learning as Transformation: Critical Perspectives on a Theory in Progress*, ed. Jack Mezirow & Associates (Jossey-Bass, 2000), 3–33; Jack Mezirow, "Learning to Think Like an Adult: Core Concepts of Transformation Theory," in *Handbook of Transformative Learning: Theory, Research, and Practice*, ed. Edward W. Taylor, & Patricia Cranton (John Wiley & Sons, 2012): 74.

4. Richards Heuer, *Psychology of Intelligence Analysis* (Center for the Study of Intelligence, 1999), 5.

5. E. Drago-Severson, *Becoming Adult Learners: Principles and Practices for Effective Development* (Teachers College Press, 2004); Mezirow, "Learning to Think Like an Adult."

6. Jack Mezirow, "Transformative Learning: Theory to Practice," *New Directions for Adult and Continuing Education*, 74 (1997): 5–12; Mezirow, "Learning as Transformation," 2000, 3–33.

7. Drago-Severson, *Becoming Adult Learners*; Robert Kegan, "What 'Form' Transforms? A Constructive-developmental Approach to Transformative Learning," in *Learning as Transformation: Critical Perspectives on a Theory in Progress*, 33–70, Jack Mezirow and Associates, eds. (Jossey-Bass, 2000).

8. Lisa M. Boes, Marcia B. Baxter-Magolda, and Jennifer A. Buckley, "Foundational Assumptions and Constructive -Developmental Theory: Self-Authorship Narratives," *Development and Assessment of Self-Authorship: Exploring the Concept across Cultures*, Marcia B. Baxter-Magolda, Elizabeth G. Creamer, and Peggy S. Meszaros, eds. (Stylus Publishing, 2010): 3–23; E. Drago-Severson, *Becoming Adult Learners*.

9. Julie Mendosa and Dennis Westbrooks, "Transformative Learning for Intelligence and Intelligence Studies," *Romanian Intelligence Studies Review* 21 (2019): 41–56.

10. Warren Fishbein and Gregory Treverton, "Rethinking 'Alternative Analysis' to Address Transnational Threats," (Central Intelligence Agency Sherman Kent Center, October 2004), https://apps.dtic.mil/sti/pdfs/ADA525417.pdf; Mark Lowenthal, *Intelligence: From Secrets to Policy* 7th ed. (CQ Press, 2017); Katherine Hibbs Pherson and Randolph H. Pherson, *Critical Thinking for Strategic Intelligence,* 3rd ed. (CQ Press, 2021).

11. Josh Kerbel, "The US Talks a Lot about Strategic Complexity. Too Bad it's Mostly Just Talk," *Defense One* (March 2021), https://www.defenseone.com/ideas/2021/03/US-talks-lot-about-strategic-complexity-too-bad-its-mostly-just-talk/172549/.

12. The original 45 students who received questionnaires were approximately two-thirds male, one-third female, and 90-percent White.

13. New full-time students filled out the Time I questionnaires as their one year of full-time study began (late August/early September), some in 2018 and others in 2019.

14. Irving Seidman, *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*, 4th ed. (Teacher's College Press, 2013).

15. Drago-Severson, *Becoming Adult Learners*; Drago-Severson and Blum-DeStefano, *Tell Me So I Can Hear You*.

16. Ibid.

17. Boes, Baxter-Magolda, and Buckley, "Foundational Assumptions," 3–23.

18. Drago-Severson, *Becoming Adult Learners*.

19. Boes, Baxter-Magolda, and Buckley, "Foundational Assumptions," 3–23; Drago-Severson, *Becoming Adult Learners*.

20. Robert R. Kegan and L. Lahey, *An Everyone Culture: Becoming a Deliberately Developmental Organization* (Harvard Business Review Press, 2016).

21. A. Nicolaides and D. McCallum, "Inquiry in Action for Leadership in Turbulent Times: Exploring the Connections between Transformative Learning and Adaptive Leadership," *Journal of Transformative Education* 11, 4 (2013): 251.

22. Craig L. Pearce and Charles C. Manz, "The New Silver Bullets of Leadership: The Importance of Self- and Shared Leadership in Knowledge Work," *Organizational Dynamics* 34, 2 (2005): 130–40, doi:10.1016/j.orgdyn.2005.03.003.

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