

# Towards validating a Mission Command Team Training Model in GIFT for Military Populations

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## INTRODUCTION

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While team performance has been the primary focus of team research (Sottolare et al., 2017), this analytical works directionally in a backwards manner, beginning with the end product assessment of successful output to determine the starting points of behavioral, attitudinal, and cognitive constructs that gave rise to that output. Additionally, team performance research has given rise to a breadth and scope of constructs identified and defined in the literature that are numerous, overlapping, and directionally unclear. As such, part of the complexity in unpacking team training models lies in the fact that team product outcomes are the result of numerable variations of institutions with tasks that require unique solutions and outcomes. Therefore, working backwards from a performance outcome approach lends itself to a great many possible model configurations that are almost unwieldy to empirical test.

For the purposes of this paper, we are shifting our lens from team performance outcomes to team formation. Using an existing team model based on the Mission Command paradigm of the US Army, we seek to examine the structural elements that are necessary for effective team formation modeled after this paradigm. While our approach is domain specific, it is our expectation that our analysis on team formation will have broader industry applications.

Specifically, our proposed team training model for GIFT is an adaption of Belbin's theory of team roles, where the notion of balance of team roles is expanded to incorporate the effects of power/knowledge discourse (Foucault) and adaptive capacity. This approach is based both on qualitative observations conducted at the United States Military Academy (USMA), as well as a review of the literature on research related to team performance (Kjaergaard, Leon, Venables, & Fink, 2013; Sottolare et al., 2017), team role theory (Belbin, 1981; Fisher, Hunter, Macrosson, 1998; Hamada & Sugawara, 2013; Skvoretz, 2016; Liubchenko & Sulimova, 2017), and team learning beliefs and behaviors (Kjaergaard, Leon, Venables, & Fink, 2013; Massenber, Spurk, & Kauffeld, 2015; Van den Bossche et al, 2006; Veestraeten, Kunt, & Dochy, 2014).

Accordingly, this paper will first discuss the qualitative observations of team formation observed within the MS200 course in the Department of Military Instruction at USMA that gave rise to an identified Military Command Abdication Narcissistic (MCAN) model of team formation that can be used to inform team training modeling in GIFT. After a discussion of contextualizing the face validity of this model within the broader instructional aims of the cadets as future members of the US Army, we will discuss the Revised Team Role Theory (RTR) components that can serve as a framework for implementing the MCAN team training model. Lastly, we will briefly propose a methodology to validate this framework through a mixed methods research agenda.

## **MCAN MODEL**

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We identify the emerging and established military populations as those who are seeking to obtain and those who have already obtained full membership within the US Army. The first population is identified as the cadet learners at USMA working in teams to accomplish learning objectives in preparation for serving in the role as Platoon Leader in the US Army upon graduation. The second population consists of team-sized elements conducting operations at the tactical-level of the US Army. This paper will focus on the first population with an understanding that this cadet population is being trained for incorporation into the second population.

### ***Mission Command model of teams***

In analyzing the dynamics of teams in our identified second population, it is recognized that these teams within the operational forces conduct operations at a tactical level functionally under the umbrella of Mission Command as defined by the US Army. Within Mission Command, it is understood that the unit will fight to achieve a small number of key tasks until the point of either being destroyed or heavily attrited. Specifically, that dictates junior leaders will assume responsibilities in the next role in the event a superior becomes incapacitated. In order for this process to work effectively, not only do all members of the team need to have previously demonstrated sufficient competencies in their assigned roles, but a level of trust has to be developed across the entire organization where a tactical unit will still continue “to follow” if a subordinate leader assumes control and essentially must seamlessly adopt a new role within the team. Therefore, as part of developing a team training model within GIFT oriented towards military instruction within a cadet population, elements of role adoption, role execution, and role adoption are key variables that need to be operationalized and assessed in order to support a cadet’s readiness to function within a Mission Command team model.

### ***USMA cadets in Department of Military Instruction***

At USMA, the cadet learner cohort is consistently presented with challenges within the Military Science environment. To begin with, the population consists of second-year students with minimal experiential knowledge that consists of the most basic individual military tasks. USMA’s central mission is to educate, train and inspire the Corps of Cadets so that each graduate is a commissioned leader of character committed to the values of Duty, Honor, Country and prepared for a career of professional excellence and service to the nation as an officer in the United States Army. This also includes preparing cadet learners for their future roles as Platoon Leaders in the Army’s Operational Force. Many variables within the venue delineate it from what would be likened to a “normal” college experience.

Academically, the workload is immense comparative to a standard undergraduate curriculum track. For example, it is mandated that a cadet learner execute between 21 and 22 credit hours per semester of their sophomore year. Militarily, the cadet begins their immersive 47-month USMA experience where they have exposure to military development and mentorship that spans the moment they arrive on Reception Day as a freshman until they depart to rapidly integrate into the Army Operational Force. Specific to this discussion involving salient variables of successful team training dynamics, the authors of this paper maintain that the Military Science 200 classroom within the Department of Military Instruction can indeed be categorized as a team unit. Importantly, the Military Program seeks to instill in Cadets the foundational military competencies necessary to win in the US Army, inspiring them to professional excellence and service to the Nation. To accomplish this, the Military Program provides a framework for military education, training, and leader development focused on the roles and principles of being a future tactical Army small unit leader (Platoon Leader. Nested in this higher purpose of the Military Program, the Military Science Program synchronizes across two of the four domains: Military and Academic. Specifically, the Military Science Program looks to develop the small unit leaders’

abilities to efficiently and effectively plan, prepare, execute and assess complex tactical missions by way of Troop Leading Procedures and Mission-type orders.

To begin, the cadet learner is quickly immersed in a military environment through the span of their first summer period prior to officially entering into the Corps of Cadets and beginning academic studies. During this period, cadets are exposed to rigorous challenges such as hiking 12 miles with a personal equipment load of 45 pounds, uncomfortable conditions such as constantly being exposed to stifling mid-summer heat often surpassing 95 to 100 degrees while conducting training, and being trained on the most basic military tasks such as rifle marksmanship, combat lifesaver training, and land navigation. Cadets navigate through these experiences individually and collectively, enduring shared hardships alongside one another and rapidly developing their military experiential knowledge base.

The initial summer venue serves as a lab comparable to executing a “hard science” academic degree lab to conduct experiments or test hypotheses. From there, the entire population, segregated into two cohorts of approximately 600 cadets, executes the MS100 curriculum, transferring their initial military experiential knowledge and applying it to fundamental components such as understanding the basic land navigation techniques such as “handrailing.” It is important to note that the pedagogical structure of the MS100 curriculum centers on providing foundational declarative knowledge.

Once complete with both the initial lab and classroom experience, the next summer lab experiment, known as Cadet Field Training (CFT) becomes increasingly more difficult where they have to execute military training events both as members of squad and team leaders, navigating various experiences that includes a multi-day field training exercise (FTX) where the cadets remain exposed to the elements and have to conduct multiple small-unit operations such as an ambush or platoon attack. After the lab concludes, the collective population reconvenes to execute the MS200 curriculum.

Unique to the MS200 curriculum versus the MS100 curriculum is that the pedagogical structure completely changes. Cadet learners are forced to learn and retain procedural knowledge consisting of varying conceptual frameworks such as the model to approach Enemy Analysis. The Enemy Analysis framework consists of understanding Composition, Disposition, Strength, and Capabilities. Simultaneous to understanding and anchoring themselves to this framework, they are learning how to craft the narrative to communicate this generated analysis as well as learning where to input the information into the Operations Order, a standardized written medium the Operational Force utilizes to communicate mission-type military orders, essential to the true essence of Mission Command. The facet of shared hardships is an example of one element of their assumed roles as emerging military member.

Other salient elements that emerge from this dynamic include heuristic evaluations of their peers’ competencies both inside and outside of the classroom, shared beliefs in their goal orientation in accomplishing assignments, discourse negotiations in problem solving, and adaptability in shifting or adapting to new role assignments within a team when a deficiency is noted or occurs. While the content frameworks are beyond the scope of this paper, taking a closer look at the dynamics of team formation as it relates to completing classroom assignments within MS200 becomes starting point for developing a Mission Command team model that can be employed in GIFT, and can further guide the construction of interventions to correct two commonly occurring dysfunctional team models: the abdication and narcissistic models.

### ***Deviations from Mission Command: Abdication and narcissistic models***

The abdication and narcissistic models are two team models that have been identified as dysfunctional and ineffective within MS200, yet adopted by cadets upon being assigned a team assessment task. As open dialogue and group activity is a central pedagogical approach to learning, cadet learners in the course are implicitly and explicitly making their own continual assessments of their peers to determine their competency with course content. These heuristic competency assessments ultimately translate to how cadets self-select and form teams within the classroom. Noticeably, when there is a balance of competency and trust present among self-selected team members, the rudimentary elements of a Mission Command type team are in place. This in turn leads to a successful result in team assessment

outcomes, and arguably provides a tangible model of how teams should effectively function in their post-USMA placements. This, unfortunately, is not the only team configuration that emerges. Instead, there is observational evidence that two other team types form that deviate significantly from the Mission Command model. These two other team configurations have been identified as abdication and narcissistic team constructs.

An abdication team construct emerges when a self-selected team of underperforming cadets come together to minimally accomplish an assessment team task. This occurs when cadets create teams where there may or may not be a balance of competencies, but the intent of the team is to accomplish only what is minimally required to pass the assessment with the least amount of effort. In this model, while the team members might trust each other to do their assigned work, they abdicate any responsibility to put forth effort to essentially fight, or more appropriately, struggle, to succeed in their assessment task.

In the narcissistic team construct, this dysfunctional configuration occurs when there is an imbalance of competencies and an absence of trust amongst the cadets. In this model, the overachieving cadet believes their competency is superior to their peers and seeks out groups with substandard partners to insure he or she can produce all the required work independently. While the key tasks might be successfully accomplished, the team itself fails to work as a cohesive unit and in this way fails as a team assessment.

While the dynamics of this MCAN model has been identified primarily within the confines of the USMA classroom, it is still a viable starting place from which to devise a team training model as the patterns of behavior that are exhibited in the classroom at USMA may very well carryover -- if not intervened upon -- into the US Army more generally. In this way and within this context, then, designing a team training model devised on the initial observable dynamics and data that emerge within this course is a valid approach. What follows, then, is identifying the behavioral, cognitive, and attitudinal markers that shape the MCAN model so the proposed design of the GIFT MCAN model has clearly articulated possible points of adaptive interventions that can be devised for team training. Accordingly, what follows is an analysis of the relevant behavioral, cognitive, and attitudinal markers that factor into the MCAN model that we term the Revised Team Role theory (RTR) derived in part from Belbin's (1981) Team Role Theory, Foucault's notion of power and discourse, and adaptive capacity adopted from ecology and society literature.

## **A REVISED ROLE THEORY**

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While researchers are generally moving towards behavioral markers with more objective measures of psychological constructs (Wiese et al., 2015), this approach is limiting in that it does not account for pre-performance team formation elements that should be included in team training modeling. While behavioral markers may be effective to evaluate the cumulative success of a team and the outcomes of team performance, it does not include other markers that inform behavioral performances, such as the function of role adoption in team formation, individual competencies and beliefs, power dynamics in discourse, and adaptive capacities, which could be used as a point of intervention during GIFT team training. Accordingly, this paper suggests unpacking team training through a more comprehensive lens where markers are derived based on the Revised Team Roles Theory (RTR), an adaption and expansion of Belbin's (1981, 1992) original Team Roles theory.

### ***Revised Team Role Theory: Role adoption***

Belbin's theory of Team Roles (1981, 1992) maintained that a team's performance could be predicted depending upon the knowledge of each team member's team role. Identifying the role profiles of each team members assigned to specific role types, and assuming there was the requisite balance of types in a team, Belbin maintained you could predict that a team would be high performing. For RTR, this first element of role adoption is akin to Belbin's theory: teams emerge as individuals either are placed in,

or self-selected to, roles on a team in order to problem solve and execute activities. The roles assigned and subsequently assumed by the individual starts from a place of competencies. If the individual has the competency to fill a specific role, they assume that role as part of the team. However, at this point, the RTR diverges from the Belbin's model.

The basic premise of RTR is that the notion that successful team outcomes is dependent upon a cumulative hierarchy of role adoption, role execution, and role adaptation. Within institutions, teams with specific roles are designed to solve a particular problem or task. The ideal role adoption occurs when an individual's competencies align with the parameters of the specific defined role within the team. For this alignment to happen, competencies and traits must also be taken into consideration in the initial team formation, as these elements will influence the process of team performance. The vetting of competencies and traits happens at two levels: in initial team formation when an individual's competency meets the required role to be filled. The second vetting occurs once team formation is in place, and other team members vet each other heuristically so to individually assess the competencies and traits of team members, and determine the balance of power within a group.

Individual heuristic and more formal evaluations of traits and competencies is an ongoing process in a team, and revisions of prior conceptions of individuals can change as team members either confirm or dispel initial perceptions of competencies through their performance. In this way, perceptions of competencies of is the cornerstone to establishing trust. If you do not believe that your team member is competent to succeed in their assigned task, you will not trust them. However, if they demonstrate competency in spite of your prior belief, then trust can be established, and through the assessment of individual competencies within a team, collective cohesion can be established. This first phase is critical to effect team performance. If the team cannot function because there are failures of competencies or a lack of trust, task will not be effectively or efficiently executed, and communication will be compromised. In short, the role execution phase will be flawed.

Referring back to the MCAN model, one can see how the narcissistic and abdication models of teams emerges based on this first phase of role adoption and competency evaluation. If one member of the team determines that the other members are not competent, they will not trust their team mates to successfully perform their tasks, and accordingly will work and make decisions independently. If, however, collectively the team assesses that there is a lack of competency all around, then the team will readily perform at the lowest acceptable level, compromising an effective and successful team outcome in performance.

### ***Revised Team Role Theory: Role execution***

In the second phase of RTR -- role execution -- the objective is to solve a problem that requires the competency of more than one individual, otherwise a team would be unnecessary. As previously mentioned, if there are failures of competency or trust, the execution of the roles to address the assigned tasks may occur, but not at a level of optimal effectiveness or efficiency. If, however, competencies are vetted and trust is established, the execution of tasks may still be compromised if communication is compromised when the power dynamics that shape discourse within a team takes the shape of power as *domination* rather than power to *shape ideas and solutions* (Karlburgh, 2005).

Power dynamics are distinct from organizational citizenship behavior (OCB), which according to Organ (1988), is "individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promotes the effective functioning of the organization" (p. 4), later redefined by Organ (1997) as "performance that supports the social and psychological environment in which task performance takes place" (p. 95). For this discussion, we are accepting Foucault's premise that power is "everywhere" and that power is not inherently good or bad. Rather, power is a strategy that limits words and actions, but can also open up new ways of acting and thinking (Foucault, 1980).

For example, if an individual in a team engages in a strategy of discourse that seeks to dominate and dictate the shape of ideas and decisions, this erodes trust within the team, dismantles collective

efficacy, and impedes a team's ability to use discourse to open up new ways of acting, thinking, and problem solving. Using power to dominate can originate either from an explicit or implicit role hierarchy within a team, where there is an understanding that some roles are more equal and awarded superior rights than others. But power to dominate can also emerge based on the character traits or an individual or set of individuals. Accordingly, understanding how power is used in team discourse is a key element to understanding how teams engage in constructive or destructive communication patterns, sheds light on the difficulty of conflict management, and is instrumental in team cohesion and performance.

Going back to our MCAN model, then, a functional representation of role execution can be operationalized when discourse is equitably engaged upon by team members with a predominance of new ways of acting and thinking in comparison to unproductive words and actions. Our narcissistic model would deviate from the MCAN model in that discourse is not equitably engaged upon by all members. Whereas the abdication model would have equitable engagement of discourse, but the discourse would be unproductive in words and actions.

In sum, power dynamics are realized through discourse that emerges during role execution, through resisting or complying with power strategies, and mediated by individual traits, such as personality. In this way, understanding the parameters of the roles adopted by individuals is as important as understanding how traits interact with strategic power negotiations. If roles are rigid, and power dynamics are non-negotiable, then communication and conflict management will be constrained – even if trust and collective cohesion have previously been established.

### ***Revised Team Role Theory: Role adaption***

The last element to consider in defining the MCAN model is the notion of role adaption, or adaptive capacity. Seen mostly in the literature of ecology of human societies, adaptive capacity refers to the conditions that enable people to anticipate and respond to change, and recover from and minimize the consequences of change (Adger and Vincent, 2005). For the purposes developing a team training model, adaptive capacity includes the notion of reflexivity, which is a group level construct on the ability for teams to reflect, communicate, and adapt objectives, decision-making and processes, (Widmer, Schippers, & West, 2009), as well as an individual's ability to shift, change, and adopt roles as needed. However, it also includes traits such as resilience, self-efficacy, innovative thinking, and selective retention (the ability to analyze and reason logically) (Brown & Westaway, 2011) that allow for individuals to move in concert beyond their initial adopted role and shift into new ones. In short, adaptive capacity is a key element in the Mission Command model, and including it a team training model is instrumentally important. Key markers for adaptive capacity, then, include the cumulative effect of successful role adoption that includes trust and collective efficacy, successful role execution including constructive discourse, with the additional individual traits that allow for new ways of thinking and acting independently so to reconfigure team roles. In this way, RTR makes plain how team training is an ongoing, hierarchical, cumulative and iterative process – and the necessary components to configure in a MCAN model for GIFT.

## **PROPOSED METHODOLOGY TO VALIDATE MCAN MODEL & RTR**

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As part of the ongoing project in skill decay that is currently in development with the Department of Military Instruction at USMA, the authors of this paper propose a mixed method approach to validating the cumulative, hierarchical MCAN model of team training. Qualitative observations on team dynamics will be conducted in the classroom, coding affect and behavior using the BROMP method while cadets are engaged in team assignments. Further, while cadets are engaged in using GIFT to complete team assignments, log files of interactions and communications will be captured and analyzed. Depending upon the actions/interactions and consequences of observed behavior, the next phase of validating the MCAN

model would include a quasi-experimental study that would integrate self-survey instruments, such as self-efficacy, HEXACO personality test, with periodic surveys to evaluate the heuristic beliefs of cadets over the course of a semester. Structural equation modeling will be used to test our cumulative hierarchical MCAN model using data from team assignments completed both via face-to-face and through GIFT.

## CONCLUSION

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This paper proposed how to best model effective team tutoring for both emerging and established military populations. As a derivative of a concurrent effort to address how to best support content mastery and remediate skill decay on an individual level, the authors identified a target team model, MCAN, as well as articulated a cumulative, hierarchical framework (RTR) to identify behavioral, cognitive, and attitudinal markers that can be used to build the MCAN model in GIFT. While this MCAN model and RTR framework is devised from qualitative observations and a review of the relevant literature, future work in this area includes executing a mixed method approach to empirically validate this model to obtain evidence towards adopting this comprehensive design architecture for military team training in GIFT.

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**Dr. Michael Boyce** is a research psychologist with ARL's adaptive training research program. For the past 3 years his emphasis has been in using technologies like GIFT to accurately assess learner knowledge and performance. Located at the United States Military Academy at West Point, his goal is to better inform the research progress of GIFT through interactions with a military student population. He received his Ph.D. in Applied/Experimental Human Factors Psychology from the University of Central Florida in 2014.

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