Technical Report 1354

Army Information Operations Officer Needs Analysis Report

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U.S. Army Research Institute

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14. ABSTRACT *(Maximum 200 words)*:

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) was asked by the Information Proponent Office (IPO) to conduct a Needs Analysis for the Information Operations (IO) officer. Information Operations (IO) is the integrated employment, during military operations, of IRCs in concert with other lines of operation to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own (JP 3-13). The IO officer serves as the integration specialist for IO. The purpose of the needs analysis was to determine the training, education, and/or other changes to Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel, and Facilities (DOTMLPF) needed to meet future requirements for IO officers. Data was collected through interviews with IO officers and commanders and a survey administered to IO officers. Results and recommendations are organized by DOTMLPF.

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ARMY INFORMATION OPERATIONS OFFICER NEEDS ANALYSIS REPORT

EXECUTIVE SUMMARY

Research Requirement:

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) was asked to provide Technical Advisory Service (TAS) by the Information Proponent Office (IPO) to conduct a needs analysis for the Information Operations (IO) officer. The purpose of the needs analysis was to determine the training, education, and/or other changes to Doctrine, Organization, Training, Materiel, Leadership & Education, Personnel, and Facilities (DOTMLPF) needed to meet future requirements for IO officers.

Procedure:

The Principal Investigator and Subject Matter Experts (SME) from the Information Proponent Office (IPO) developed interview protocol for IO officers and commanders familiar with Information Operations (IO). Data was then collected through interviews with IO officers and commanders. After initial data analysis of the interview data, a survey was developed and administered to IO officers online.

Findings:

Results of the needs analysis are organized by DOTMLPF. For Doctrine, there were several needs reported for FM 3-13, including clarifying the definitions of IO and ensuring consistency across doctrine; nesting IO into other relevant doctrine; and including more detailed information on assessment, organizational structure, and the Information-Related Capabilities (IRCs). The data also suggest the use of more examples including graphs, charts, and vignettes in FM 3-13.

In regards to Organization, the data support the increase of IO education in Professional Military Education (PME) to help commanders and staff officers understand IO and how to use it. Utilizing the IO cell when organizing a unit was also recommended. Finally, it would be helpful to develop examples of what an IO cell should look like to aid in utilizing the IO cell.

Training and Education was a rich topic area which resulted in numerous recommendations. Much of the needs analysis focused on the IO officer Qualifying Course (QC). There were a number of recommendations for topics that need more focus, including targeting, written communication skills, the IO officers' role in garrison, cultural awareness, Army design methodology, and understanding the enemy. The data also support more focus on IO assessment, especially if new IO officers are going to continue to be sent straight to the brigade S7 job immediately following completion of the QC. In addition, covering the role of the Civil Affairs Officer (CAO) and Intel Analysts, and how to use atmospherics during assessment would be helpful for IO officers, according to the data. Another recommendation was to include more detail on the IRCs, placing more focus on Military Deception (MILDEC) and Civil Affairs (CA), and less focus on Combat Camera (COMCAM) and Operational Security (OPSEC).

Finally, there were recommendations to include more examples, vignettes, and practical exercises in the QC to facilitate learning and create an advanced course in addition to the QC.

The Training and Education section also touched on the Combat Training Centers (CTCs). The data suggest the IPO observe CTC exercises more often to provide input on how to enhance training and to better showcase IO at the CTCs. Another recommendation was to ensure experienced IO officers are sent to the CTCs to serve as observer coach trainers (OCTs). For Materiel, one recommendation was to stress the importance of using open source media in the QC and through the IPO because IO officers did not feel as prepared to use open source media, a commonly utilized tool for IO officers. In addition, data suggested a need to organize the available tools (e.g., create an online community of practice) so IO officers can become familiar with what tools are available and be able to utilize a common resource. Another suggestion was to develop a tool (or utilize an already existing tool) that allows IO officers to share information jointly and integrate with the staff. A tool that helps visualize the information environment (IE) was also recommended.

In the Leadership section, one recommendation was to include more leadership development in the QC and for IO officers in general because IO officers need to lead without formal authority. Another recommendation was to bring in senior officers to help IO officers in the QC get comfortable briefing and interacting with senior leaders so they are more effective officers.

The final section was Personnel, which was also a rich topic area including manning, professional development, the transition from tactical to joint assignments, the IO officer career path, and talent management. One issue that arose from the data was being undermanned at brigade and division. A proposed solution to the issue of manning was to utilize the IO cell to leverage others' unique skills and capabilities. Regarding professional development, the data suggested the IPO provide IO officers more information about how and when to pursue broadening experiences (e.g., training with industry and civilian education opportunities) and provide a directed self-study program. Another recommendation was to include information about how to transition from tactical to joint assignments in a professional development program. Communication from the IPO may need to span multiple avenues, such as having the information available on the website, in email blasts, and in regular meetings to ensure the information is disseminated to the widest audience possible.

The IO officer career path was a popular topic during the interviews, with a strong recommendation to send new IO officers to work on a staff or as a planner before sending them to the brigade level where they will be working in relative isolation from other IO officers. Another related suggestion was to consider the brigade S7 job as a capstone job, not an entry-level job. Finally, the data suggest the expansion of talent management for IO officers. Specifically, the IPO should work on increasing attraction of highly qualified officers to the functional area and expand selection criteria to include background and relevant competencies.

Utilization and Dissemination of Findings:

The needs analysis provides guidance to the IPO to implement changes to DOTMLPF that will result in more effective IO officers who are prepared to meet future requirements for IO in the Army.

ARMY INFORMATION OPERATIONS OFFICER NEEDS ANALYSIS REPORT

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Army Information Operations Officer Needs Analysis Report

Introduction

Over the past decade, the importance of information operations in achieving effects in the operational environment has been increasingly recognized by Army officers. Information Operations (IO) is the integrated employment of information-related capabilities (IRCs) during military operations in concert with other lines of operation to influence, disrupt, corrupt, or usurp the decision making of adversaries and potential adversaries while protecting our own (JP 3-13). Information-related capabilities (IRCs) are capabilities, techniques, or activities employing information to affect the information environment (IE) to generate an end(s) (FM 3-13, p. v). The Army information operations officer (IO officer) serves as the integration specialist for IO and is the primary integrator for holistic effects in the IE (FM 3-13, p. v). The IO officer is responsible for integrating IRCs and is responsible for the plan to achieve the commander's intended effects. The most common jobs for the IO officer are as the brigade S7 and the division G7.

The U.S Army Research Institute for the Behavioral and Social Sciences (ARI) was asked to provide Technical Advisory Service (TAS) by the Information Proponent Office (IPO) to conduct a needs analysis for the IO officer. The purpose of the needs analysis was to determine the training, education, and/or other changes to DOTMLPF needed to meet future requirements for IO officers. The last needs analysis for the IO officer was conducted in 2003 and was a training needs analysis. Concurrent but independent of the present research, a Capabilities Based Assessment was conducted by the IPO. The following report documents the findings of ARI's IO officer needs analysis.

Method

Data were collected in two parts. Interview data were collected first. Ten IO officers and seven commanders who had experience working with IO officers were interviewed. Subject Matter Experts (SMEs) from the IPO contributed to interview protocol development. The interview protocol for IO officers asked about doctrine, perceptions of IO, placement within the organization, training and education, job preparedness, assessment, tools, mentorship, leadership, and personnel issues. Commanders of IO officers were asked about the same topics (some in less depth), as well as their understanding of IO and how to use IO officers.

After interviews were collected and initial data analysis was complete, a survey for IO officers was developed, based on the interview data. The survey was distributed online and an invitation was sent to all IO officers with 198 completing the survey. This resulted in a 37% response rate.

Results

The Results section is organized by DOTMLPF.

Doctrine

In the survey, IO officers were asked several questions about relevant doctrine. When asked about their familiarity with the new Inform and Influence Activities doctrine (FM 3-13), 83% of IO officers reported they have read partially, read completely, or read and implemented doctrine into organizational operations. Similarly, when asked about ADP 6-0 Mission Command, 81% of IO officers reported they have read partially, read completely, or read and implemented doctrine into organizational operations (see Figure 1).
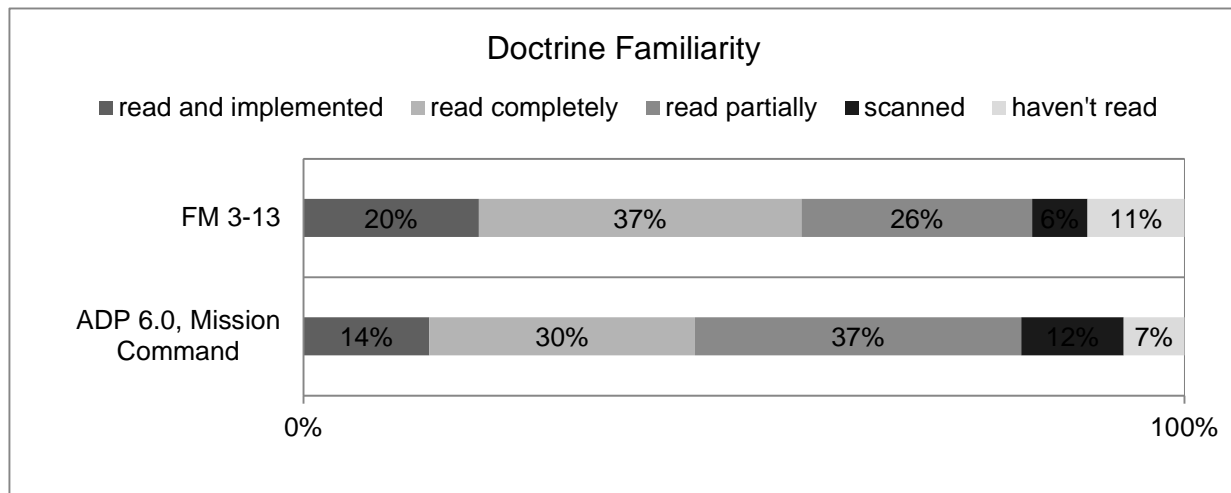
Figure 1. IO officer survey responses to questions about familiarity with doctrine.

IO officers were also asked about their satisfaction with the new FM 3-13, and 55% of IO officers reported they are satisfied with the new FM 3-13 (see Figure 2).
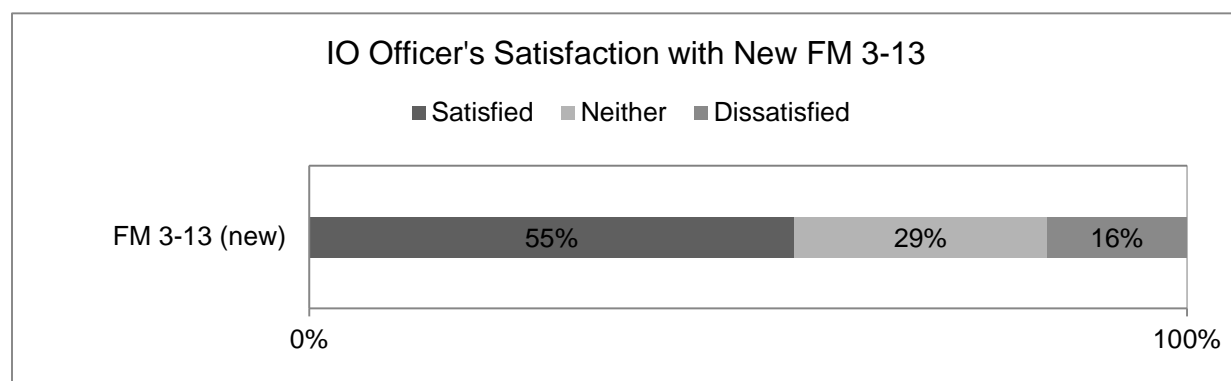
Figure 2. IO officer survey responses to satisfaction with the new IO doctrine.

To gain understanding of the relationship between familiarity and satisfaction with doctrine, Figure 3 illustrates the breakdown of familiarity with the new FM 3-13 and satisfaction with it.
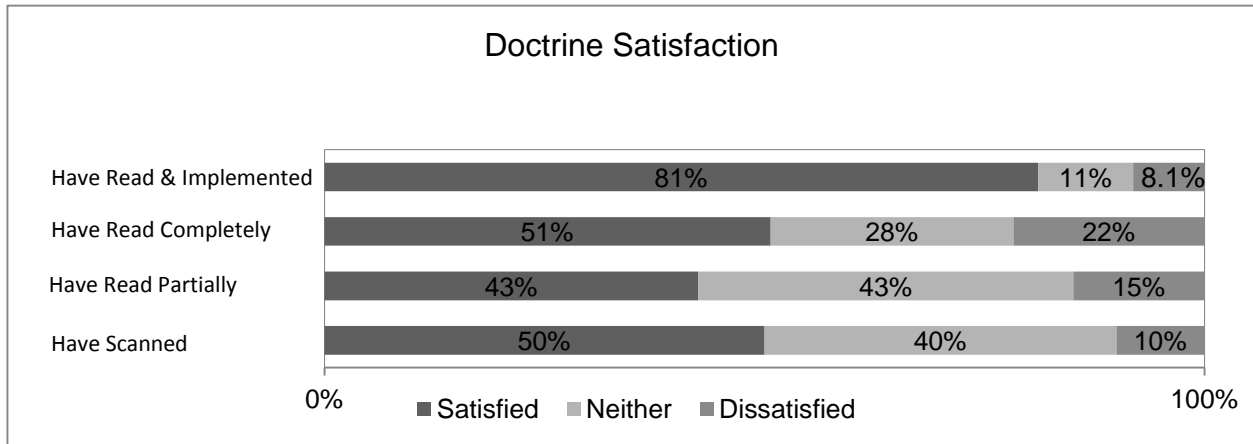
Figure 3. Breakdown of survey data to illustrate level of satisfaction with FM 3-13 based on familiarity with the doctrine.

The data show that those who reported having implemented the new FM 3-13 were significantly more satisfied with the new doctrine ($p < .05$). Therefore, overall satisfaction with the new FM 3-13 may increase as more IO officers implement the doctrine.

Sources of dissatisfaction. Overall, only slightly over half of IO officers were satisfied with the new FM 3-13, so it is important to consider why so many IO officers were not satisfied. There were numerous sources of dissatisfaction with the new FM 3-13, as shown by IO officer's open-ended survey responses and from interviews with IO officers and commanders. Sources of dissatisfaction mainly came from the definition of IO, relation to other doctrine, and missing elements some think that should be included in the new doctrine.

One source of dissatisfaction was in the definition of IO. Some IO officers mentioned that there is confusion over the definitions because they have changed repeatedly over the years. Other IO officers requested a more clear definition of IO. In addition, IO officers mentioned dissatisfaction with joint and Army's definitions not aligning, indicating a need for definitions to be consistent across doctrine.

There was also dissatisfaction with the new FM 3-13 in relation to other doctrine. In addition to definitions needing to be consistent, the overall content of FM 3-13 should be better aligned with the joint doctrine and doctrine from the sister services. Further, as one IO officer stated, IO "should be nested in relevant doctrine for those personnel who are going to deal with IO officers in the future," such as the war fighting functions and IRCs.

When asked what is missing from the new FM 3-13, IO officers commented on a wide range of topics, including examples (e.g., graphics, charts, vignettes), the IO officer's role in garrison, assessment, organizational structure, and more detail on the IRCs. There were many suggestions for examples that would be useful in FM 3-13. These included examples of: a Combined Information Overlay (CIO), Soldier Leader Engagement Synchronization matrices at different levels, an Annex J, and the elements of an IO mission and mission statement. In addition, IO officers would like to see more graphics, charts, and vignettes. IO officers explained

that having vignettes help to "solidify the ideas being proposed" and help "show what right looks like."

Throughout the interviews and survey, it was apparent that there is confusion over the role of IO officers in garrison. Several IO officers mentioned that they would like FM 3-13 to discuss in more depth what the IO officer job duties are in garrison. However, the FM is not technically supposed to provide information on the role in garrison, so perhaps there is another way the IPO could get information about the role in garrison to IO officers (e.g., on the website or through email blasts to all IO officers). IO officers also suggested the expansion of the assessment portion of FM 3-13 to include more detail on how to conduct assessment.

Another area of improvement for FM 3-13 is to discuss more about organizational structure and some recommendations for how to organize the staff structure. Specifically, several IO officers mentioned the need for a description of how G7s are organized at each level. In addition, IO officers commented that FM 3-13 should go into more detail on the IRCs. Specifically, IO officers commented that detailed Tactics, Techniques, and Procedures (TTPs) on the coordination and integration of IRCs would be helpful. IO officers would also like to see more information about the role of cyberspace operations (CYBER), operational security (OPSEC), and military deception (MILDEC) in FM 3-13. IO officers also called for more detail on the Public Affairs Officer's (PAO) role on the staff to clarify role distinctions because there is often confusion over who does what on the staff. Further, some IO officers mentioned the doctrine should cover who is responsible for Soldier and leader engagement (SLE) and the SLE chapter should be reworked. In addition, more detail on the application of assessment to the IRCs and methodologies for cross-staff coordination of IRCs are needed.

Finally, there were several other topics mentioned for inclusion in FM 3-13. IO officers suggested adding information on the transition from Army to joint operations, Concept of Operations (CONOPS), IO Concept of Support or Scheme of IO, IO's role in Humanitarian Assistance Disaster Relief (HADR) events, fighting in the IE, the narrative wheel, how IO is part of the operations process, and a future not based in counterinsurgency operations (COIN). This concludes the information collected that was specifically related to doctrine.

Organization

Perceptions of IO. The research effort also collected information regarding understanding IO and perceptions of IO. Survey data were mixed on how IO officers believe they are perceived by the force as a whole with 41% of IO officers agreeing that IO officers are perceived as value added, and 31% disagreeing (see Figure 4).

Perceptions of Value-Added

■Agree ■Neither ■Disagree

IO officers are perceived as value added by the force as a whole.

| 40% | 29% | 31% |

0%   100%
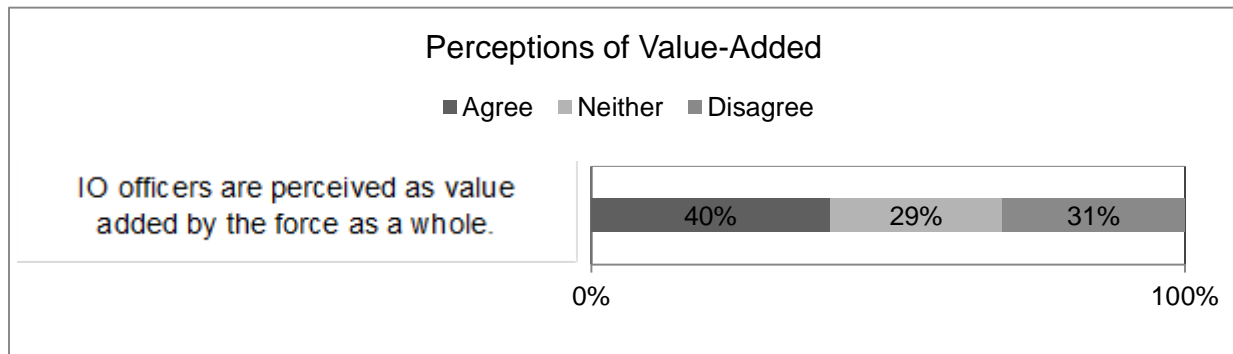
Figure 4. IO officers' survey responses regarding how the Army as a whole perceives the functional area.

However, it is important to note that it is unknown how this compares to other functional areas' perceptions of how the force views them.

IO officers were also asked more specifically about commanders' and staff officers' perceptions of IO (see Figure 5).

Commanders and staff officers I have worked with...

■Agree ■Neither ■Disagree

...find utility in IO.	CDR	67%		17%	16%
	Staff	51%		21%	28%
...use IO language correctly.	CDR	20%	28%		52%
	Staff	21%	18%		61%
...know how to use IO officer effectively.	CDR	23%	28%		49%
	Staff	24%	29%		47%
...understand importance of IRC integration.	CDR	55%		20%	25%
	Staff	37%	26%		37%
...understand assessment challenge.	CDR	48%		19%	33%
	Staff	36%	19%		45%

0%   100%
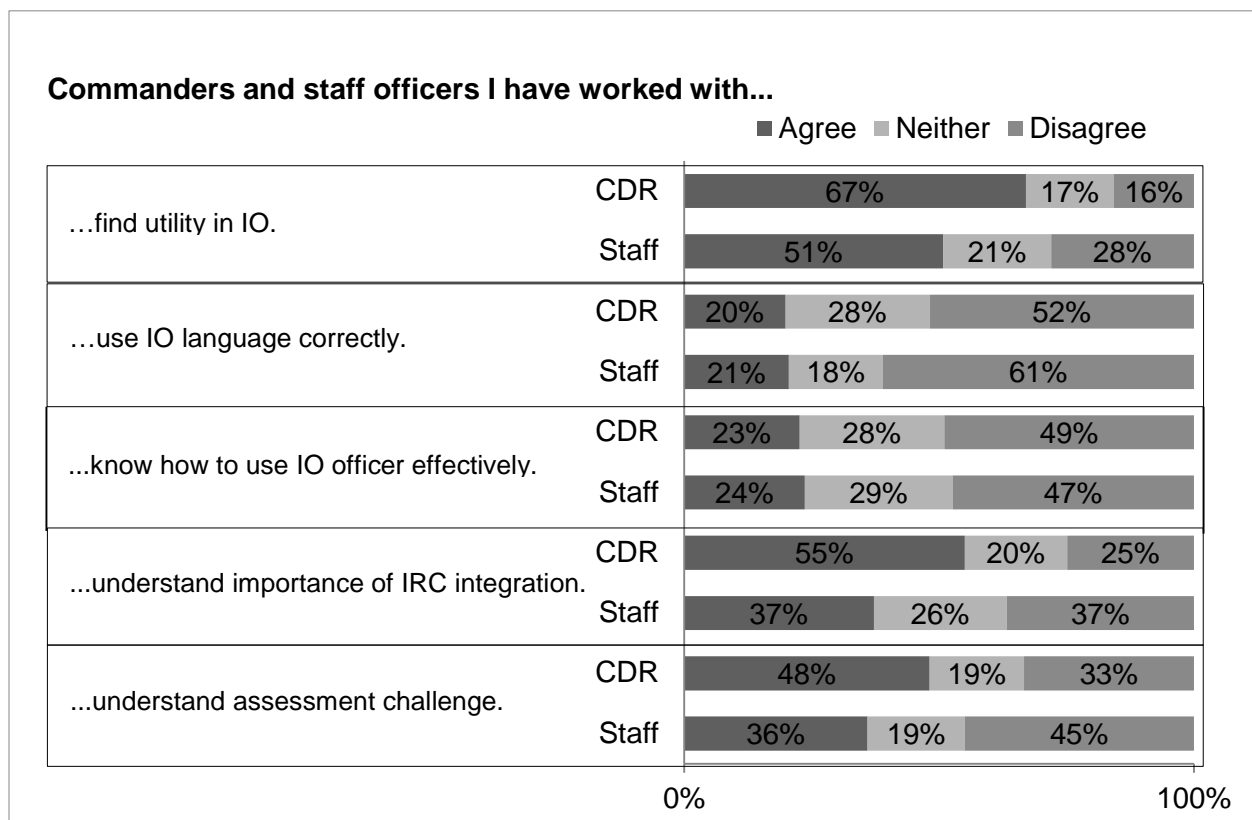
Figure 5. IO officer' perceptions of how commanders and staff officers view various aspects of IO.

As shown above, 67% of IO officers agree that commanders they have worked with find the utility in IO, whereas 51% of IO officers agree that staff officers find the utility in IO. This difference is statistically significant ($p < .05$). Perceptions of commanders and staff officers are

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similar when considering their correct use of IO language and knowing how to use IO officers effectively. Commanders are perceived by more IO officer participants as understanding the importance of IRC integration and understanding the challenge of assessment, when compared to perceptions of staff officers. These differences are also statistically significant ($p < .05$ for both). Again, it would be interesting to compare how perceptions of IO officers compare to perceptions of other functional areas, but that analysis was out of the scope of this research.

The interview data provide additional support that both commanders and IO officers recognize the importance of the operational force understanding IO. However, there is evidence from the commander interviews that everyone does not understand the value of IO or how to use it. One commander admitted that he had to Google what an IO officer was when he first got one assigned to him, and others described similar experiences. Another commander commented, "Most people have had a good enough experience that they know that yeah, we want some [IO, but] I don't know if it's totally taken root yet." Another commander stressed that some commanders

> are focused on . . . different things or the IO officer can get lost in the staff and their recommendations won't make it up because they're not a maneuver guy, they're not an infantry or an armor guy, [so they're] speaking a little bit different language.

He went on to express that how well the IO officer is utilized will be unit/commander dependent.

> You're going to get those units [where] everything is a nail and they're going to go out there and pound it, and you're going to get those units out there that understand that . . . they need to do a little bit of critical thinking . . . through the different problem sets.

IO officers and commanders also talked about how many fail to differentiate IO from military information support operations (MISO), psychological operations (PSYOP), public affairs (PA), and strategic communication (STRATCOM). One IO officer explained:

> At the brigade level, many senior staff officers and commanders have failed to see the value of IO – especially in garrison. Even if the IO officer takes initiative to do the right things within the IO sphere of influence, the IO officer may have to put those initiatives on hold, as he is told that planning the brigade ball or some other event/project has priority. Likewise, the S3s often see the IO officer as a "tasking sponge" and give the S7 all sorts of jobs that have nothing to do with IO.

Therefore, taking the survey and interview data together, there is room for improvement in educating the Army as a whole on the IO officer capability. It is important to understand why the field needs to understand IO, and the interview data provides more explanation here, as well. The simplest explanation was stated in a commander interview: "If they really don't know what those other elements bring to bear, they won't use them." Another explanation given by an IO officer was that understanding IO helps commanders and staffs recognize the importance of integrating IO into the plans process. Understanding IO also helps set expectations for what the S7 can do. Further, it can be difficult to rate an IO officer if raters do not understand what they

do. One commander distinguished between deployment and garrison, stating that it is more important to understand how to use IO officers when deployed.

The main suggestion for improving perceptions of the functional area was through educating the force. One commander stated it well:

> I don't think we do enough education, other than IO officer folks, of what IO officer has to bear. . . . If [IO] is important, we've got to make sure we're educating our leaders, all branches . . . brigade commanders, Battalion commanders, on . . . what IO brings to bear to the fight, how it should be best employed . . . what are some vignettes, and how it's used.

Many interviewees thought one good way to educate the force is to ensure IO is included in PME. There were numerous mentions of where to teach IO including at the Command and General Staff College (CGSC), Basic Officer Leader Course (BOLC), Captains Career Course (CCC), Pre-Command Course (PCC), School for Advanced Military Studies (SAMS), career courses, and branch schools. Regardless, many mentioned the importance of standardizing IO education across PME to ensure IO is being consistently taught across the force.

Another way to educate the force is to ensure high quality IO officers are put in high profile jobs and sent to CGSC and SAMS. As one IO officer explained,

> I think that's a huge advertisement for us. . . . I think we have to look very closely and . . . make sure we send the right guys to CGSC, because it's not just about educating guys, it's about advertising the IO officer career field at CGSC to the next guys who are going to be brigade staff officers.

He explained that if there is a weak IO officer in a CGSC small group of future brigade staff officers, it can set those officers' expectations so when they work with IO officers in the future, the IO officer is starting out with "less than zero credibility."

Placement and integration. The survey also covered questions related to placement and integration of IO officers. Results for questions related to how IO officers are placed and integrated within the organization were weak. As depicted in Figure 6, only 30% agreed (45% disagreed) that IO officers are placed effectively within the staff organization. Considering how well IO officers are integrated across staffs, only 27% agreed that IO officers are well integrated across staffs at brigade level, and 39% agreed that IO officers are well integrated across staffs at division level (see Figure 6). Therefore, IO officers are more satisfied with integration at division, but results are not overly positive.

Placement and Integration

■Agree　■Neither　■Disagree

IO officers are placed effectively within the staff organization.	30%	25%	45%
IO officers are well integrated across staffs at Brigade level.	27%	35%	38%
IO officers are well integrated across staffs at Division levels.	39%	39%	22%

0%　　　　　　　　　　　　　　　　　　　　　　100%
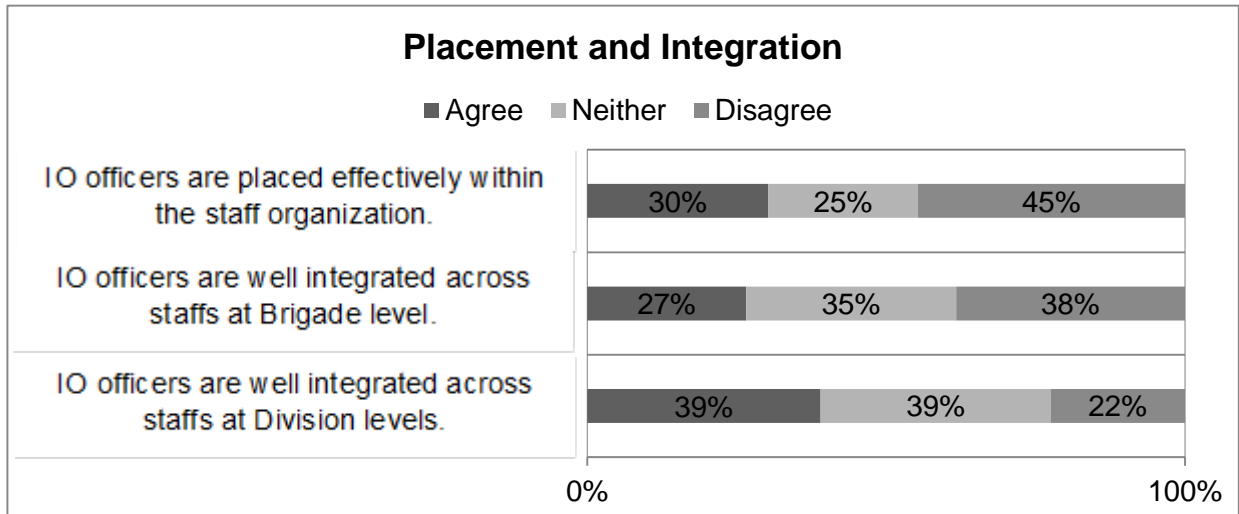
Figure 6. IO officer survey results on placement within staff organization and integration at brigade and division levels.

Overall, information sharing capabilities were viewed positively in the survey. When considering the ability to share and integrate information with the staff, 69% agreed with the statement. Sharing information throughout a joint environment was viewed slightly less positively, with 60% agreement (see Figure 7).

Information Sharing

■Agree　■Neither　■Disagree

I am able to share and integrate information with the staff.	69%	23%	8%
I am able to share information throughout a Joint environment.	60%	29%	11%

0%　　　　　　　　　　　　　　　　　　　　　　100%
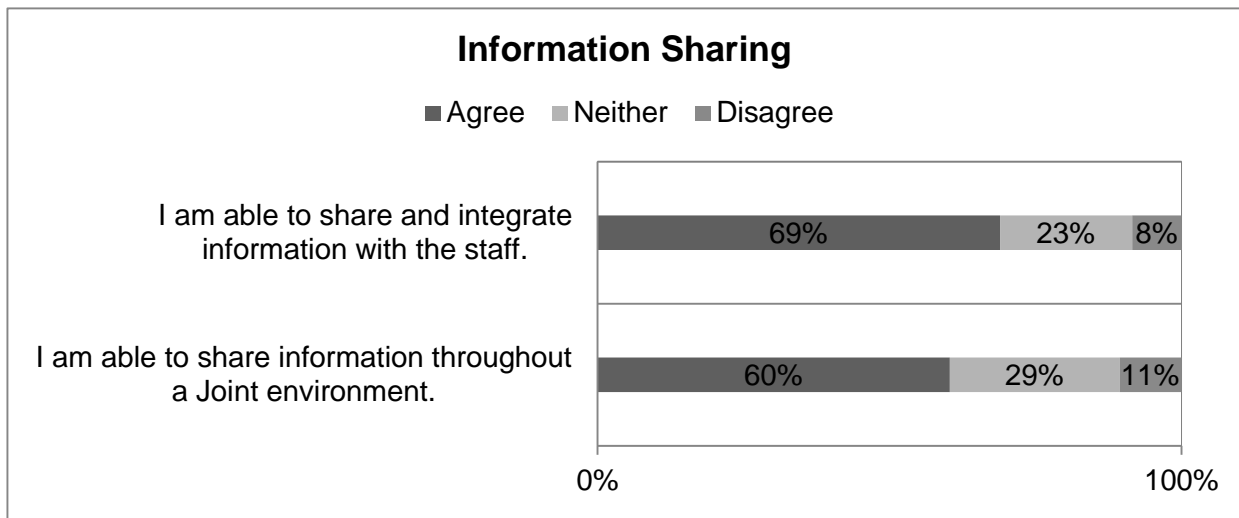
Figure 7. IO officer survey results on information sharing with the staff and in a joint environment.

The interviews help explain why placement and integration are important. One commander summed it up well:

> [IO officers] probably don't get enough credit, because . . . if not properly integrated . . . when we try to add information operations after the fact and they're not an integral part of the planning process, then sometimes they're viewed as a road block to progress. They're more effective when they're fully integrated. They're more effective when

they're influencing inside of the . . . MDMP [Military Decision Making Process] and the planning cycle, they're . . . allowing us to see . . . potential IO. Even though they may never get credit for hitting a home run.

Another commander explained, "If well integrated, they can be absolutely essential to success. If not well integrated, I think you're missing out on a key capability." Therefore, integration with the staff is vital to IO officers' success.

Interviewees explained that placement and integration is enhanced when an IO cell is utilized. If there is an IO cell, IO officers along with other related capabilities such as the IRCs, can consolidate their capabilities so they are able to meet the needs of the unit (e.g., planning, targeting), that they would be unable to meet otherwise. Consolidating into an IO cell also helps IO officers leverage others' capabilities, such as those trained in assessment and those possessing language skills. There was also some mention of creating an Information Branch that would combine IO and other related capabilities, but the details or implications were not discussed.

Placement and integration are affected by perceptions of IO. Many expressed that IO officer placement and integration are dependent on the commander and unit and vary accordingly. One commander described how he integrates IO:

The IO is a separate cell, but yet they were blended into other working groups, and the key is that they have to have an equal voice. . . . I saw that in many organizations where they just don't use [IO] because they don't understand the power of it and . . . they're off separately and nobody's listening to them. So they have to be . . . blended in with the operations, blended in with the normal processes like, for example, targeting, synchronization. They have to be blended in with the normal processes . . . to develop their plan . . . effectively solve a problem or win the fight. Where they're not effective they're kind of off on the side, they're an afterthought, and they're not well integrated into the processes.

Thus, if the command does not understand exactly what it is the IO officer is supposed to do, the IO officer may not be utilized to his/her full potential. This reinforces the earlier point that educating the force on IO is important.

In addition, placement and integration may be dependent on the commander and/or unit's previous experience with IO officers. If a brigade has had a low performing IO officer as the S7 or has not had an S7 for months, it is more difficult for the new S7 to gain credibility and integrate into the staff. Another IO officer pointed out the importance of IO officers performing well in garrison, "because when [the commander] understands [what IO officers bring to the table] in garrison, now when he is deployed, [the IO officer is] already a key integral piece of the staff now that he can't do without." (IO officers' role in garrison will be covered in more detail in the Training and Education section.)

Finally, there were some comments regarding previous experience and personality that enhance IO officers' ability to be strong integrators. Previous experience with MDMP and working on a staff were cited as increasing IO officers' ability to be good integrators.

Interviewees also mentioned that being action-oriented and aggressive helps IO officers get engaged and integrated with the staff. Personality factors and experience related to IO officer performance will be described in more detail in the Personnel section. This concludes the information collected that was specifically related to Organization.

Training and Education

         IO officer Qualification Course (QC). In the survey, IO officers were asked questions about the IO officer QC. A little more than half the IO officers (53%) reported that the IO officer QC prepared them to be an effective IO officer (see Figure 8).

QC Preparedness

■ Agree   ■ Neither   ■ Disagree

The QC prepared me to be an effective IO officer	53%	22%	25%

0%   100%
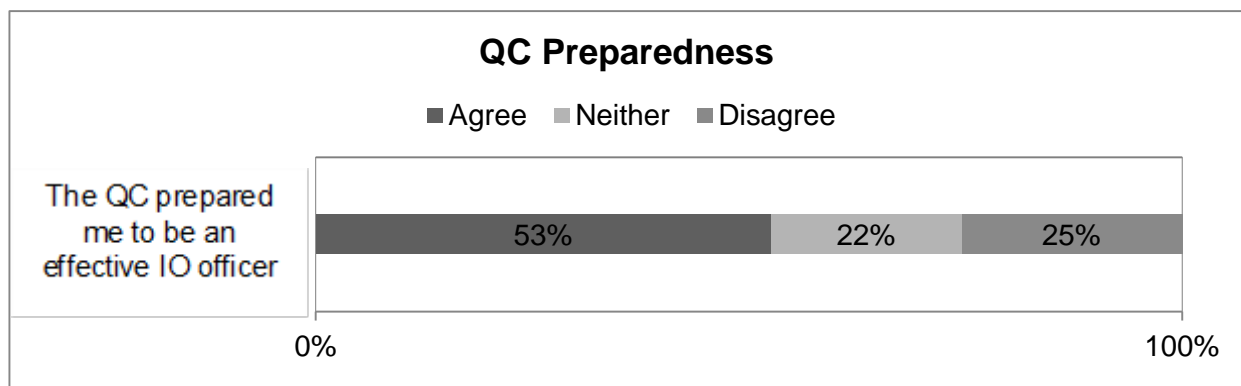
Figure 8. IO officer survey results for general perceptions of how well the QC prepares IO officers.

However, the QC changes substantially from year to year, so Figure 9 illustrates the breakdown of IO officers' preparedness by year they completed the course.

The QC prepared me to be an effective IO officer

■ agree   ■ neither   ■ disagree

QC Graduation Year	agree	neither	disagree
2005	70%	0%	30%
2006	50%	20%	30%
2007	60%	7%	33%
2008	54%	19%	27%
2009	44%	22%	35%
2010	72%	17%	11%
2011	58%	26%	16%
2012	68%	14%	18%

% of IO officer Respondents
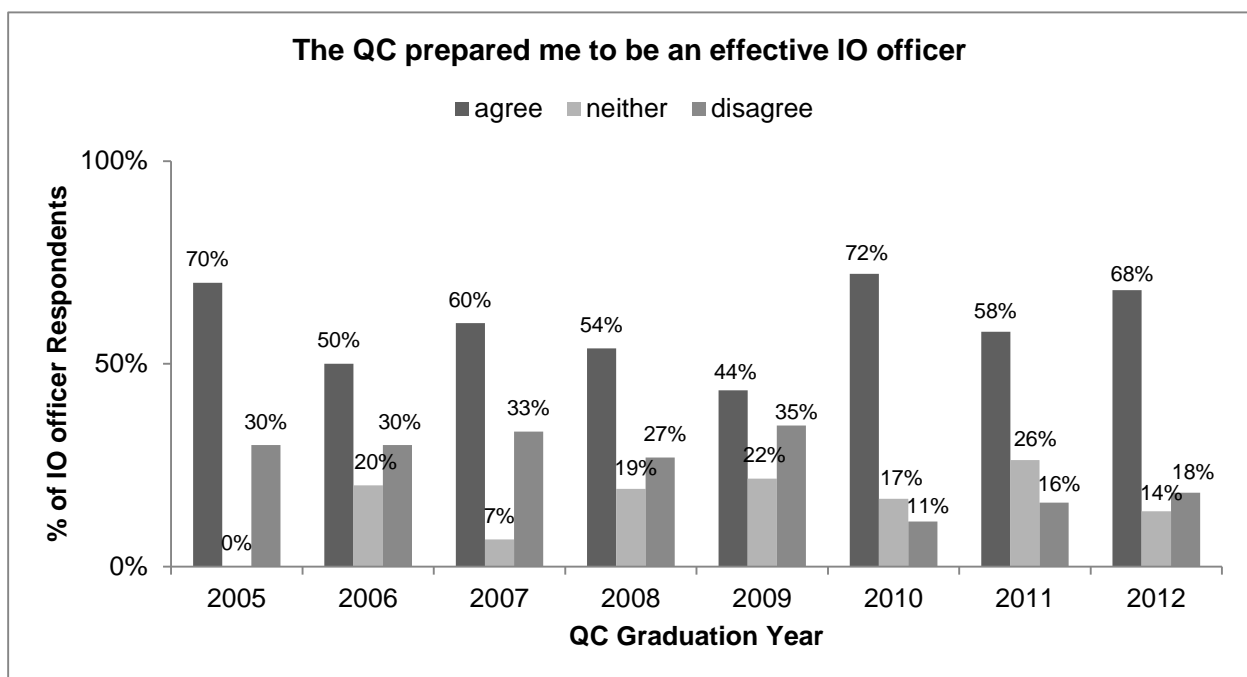
Figure 9. Breakdown of IO officers' preparedness by graduation year.

The graduation years from 2005 to 2012 were the only years with enough respondents to examine the data, so throughout the report, the graduation years are broken out as shown above. Examining preparedness by QC year illustrates a trend toward declining levels of disagreement over the years, with a slight increase in preparedness since 2010. Over half the QC students felt prepared in each graduating class, but there is room for improvement.

IO officer tasks. To get a better idea of any gaps in the QC curriculum, IO officers were asked about a number of common tasks performed as an IO officer, derived from IO officer and commander interviews and SMEs at the IPO. IO officers were asked about the frequency with which they perform each task, the criticality of each task, and how well the QC prepared them to perform each task. Table 1 displays the frequency, criticality, and preparedness for each of the tasks. Only QC graduates from 2011 and 2012 are included in this section and subsequent sections to provide the most relevant data, understanding the QC curriculum changes from year to year (see Table 1).

Table 1
IO Officer Survey Results for Frequency, Criticality, and QC Preparedness of IO Officer Job Tasks

| | Frequency | | Criticality | | QC preparedness | | | |
| | | | | | 2011 | | 2012 | |
IO Officer job tasks	% Fav	Rank	% Fav	Rank	% Fav	Rank	% Fav	Rank
Support MDMP	72	2	90	1	70	3	86	1
Brief commanders and staffs	65	4	88	2	60	9	74	3
Advise the commander	46	10	88	2	65	7	70	5
Participate in targeting meetings	61	5	85	4	55	12	36	16
Assess IO effects	37	12	84	5	70	3	74	3
Participate in formal working groups	78	1	84	5	85	1	61	8
Understand IO and how it contributes to IO at the joint level	60	6	83	7	60	9	70	5
Prepare written staff products	67	3	81	8	45	13	61	8
Develop MOEs/MOPs for assessment	37	12	79	9	65	7	82	2

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Table 1

IO Officer Survey Results for Frequency, Criticality, and QC Preparedness of IO Officer Job Tasks (continued)

| | Frequency | | Criticality | | QC preparedness | | | |
| | | | | | 2011 | | 2012 | |
IO Officer job tasks	% Fav	Rank	% Fav	Rank	% Fav	Rank	% Fav	Rank
Participate in ad hoc working groups	58	7	72	10	70	3	59	11
Apply cultural awareness	50	9	70	11	60	9	70	5
Coordinate with subordinate units that do not have organic IO officer billets	37	12	69	12	45	13	43	14
Lead formal working groups	52	8	67	13	75	2	61	8
Develop training in support of my organization's training plan	30	17	66	14	25	17	44	13
Lead ad hoc working groups	44	11	58	15	70	3	57	12
Participate in design teams	29	18	51	16	35	15	26	18
Prepare information papers or other staff correspondence for leaders	31	16	50	17	NA	NA	NA	NA
Plan/execute IO while in garrison	29	18	46	18	30	16	35	17
Use red teaming concepts	19	20	46	19	15	18	39	15
Prepare draft email correspondence for leaders	32	15	35	20	NA	NA	NA	NA

Note. % Fav = Percent Favorable; MOE = Measures of Effectiveness; MOP = Measures of Performance; NA = Not available.

The top five most frequently performed tasks were participating in formal working groups, supporting MDMP, preparing written staff products, briefing commanders and staff, and

participating in targeting meetings. The most critical tasks were supporting MDMP, advising the commander, briefing commanders and staffs, participating in targeting meetings, assessing IO effects, and participating in formal working groups. The following section highlights strengths and areas of discrepancies either within survey ratings or between the survey and interview data.

IO officers graduating from the 2012 QC felt most prepared to support MDMP out of all the tasks (see Table 1). IO officers from the 2011 QC also felt prepared to support MDMP, although 70% agreed with the statement in 2011, whereas 86% agreed with the statement in 2012. This is a point of convergence because IO officers overall ranked supporting MDMP as the second most frequently preformed task and the top most critical task. Therefore, the data suggest IO officers are getting the preparation they need to support MDMP, making this a strength of the QC.

Understanding how to support MDMP was also a topic discussed in several IO officer interviews. One IO officer explained,

> The one thing that has really helped me a lot was previous experience with MDMP. . . . I was very familiar with staff processes, how a staff worked, what the functions and roles of everybody on the staff was. That's what has allowed me to be able to maneuver through the staff effectively.

Others stressed the importance of IO officers not just having exposure to MDMP, but being fluent in MDMP to enable them to support the process. There were also concerns expressed that more experienced officers tend to be more effective when sent to the S7 position, partly because of their familiarity with MDMP and operations overall, whereas junior officers may not yet be fluent in MDMP, which may impact their effectiveness on the staff.

IO officers rated participating in targeting meetings as one of the top five most frequently performed tasks, and 85% of IO officers also rated it as critical (see Table 1). However, only 55% of 2011 QC graduates felt prepared to participate in targeting meetings, whereas only 36% of 2012 QC graduates felt prepared. The interview data supported these findings. One senior-level IO officer stated directly that he wished guys were better at targeting when they are sent to a division staff job. A commander explained:

> Targeting is definitely a duty and responsibility. . . . Targeting I would say is a shortfall across most of our institutions. We don't train our field grades to do [targeting], and so the typical IO just came out of a different branch, this is his first job as an IO. . . . come to a brigade staff or higher and . . . we look deep, whether it's deliberate planning or targeting. If I understand it right, they've had somebody talk to them about targeting on a slideshow, but they've never really done it and therefore don't really understand it.

Suggestions for the QC were to teach how to run a targeting meeting and how to develop targeting products. One commander suggested the QC design a practical exercise in which IO officers must go through a targeting cycle to help them gain experience.

Preparing written staff products is the third most frequently performed task according to the survey (67% rated it as frequently performed), and is considered a critical task by 81% of IO officers (see Table 1). However, IO officers from the 2011 and 2012 QC were not highly prepared to perform this task upon graduation (2011: 45%; 2012: 61%). This finding suggests that IO officers may benefit from more written communication skill-building in the QC, or writing skills could be used as part of selection into the functional area. It is important to note, however, that related tasks of preparing information papers or other staff correspondence and preparing draft email correspondence for leaders (see Table 1) were not rated as being performed as frequently or rated as critical, although 50% of IO officers thought preparing information papers or other staff correspondence for leaders was critical. No data was collected on how prepared recent graduates were for these tasks.

Tasks related to the IO officer's role in garrison were rated as less frequent, less critical, and few recent QC graduates felt prepared to conduct these tasks (see Table 1). However, the IO officer's role in garrison is extremely important, as the interview data highlight. One commander stated, "For the IO officer's role in home station, I really want to train the IO officer for what it is we might do if we were to deploy somewhere." Similarly, one IO officer explained,

> Training is tremendous because there are no battalion S7s. You have to take an existing officer there and ensure that that battalion commander says . . . when we deploy or when we start doing our training, you are going to be my battalion S7. Well now you've got four battalions that you have to train in [IO]. So, now you have a huge responsibility for training. You have to train your own cell. You have to [train your IRCs]. . . . some of these guys you don't even get them until you get in country, so you've got to lay all the training framework for these guys in garrison. . . . If you're not training and preparing in garrison, you will not be successful during deployment.

IO officers also expressed the importance of practicing the job of the IO officer and proving the IO officer's usefulness to the commander and staff when stationed in garrison. As one IO officer stated,

> One, IO guys [need to] understand you have to be effective in garrison if you're going to be effective when you're deployed because if you don't have that credibility on the staff, you're not just going to step up and get it. Two, you have to practice some of the tools and skills you have as an IO guy in garrison, so that when you deploy you don't have to learn everything. . . . Let commanders understand this is what I bring to the table for you because when he understands that in garrison, now when he is deployed, you're already a key integral piece of the staff now that he can't do without."

Therefore, it is concerning that many IO officers reported in the survey that they did not feel prepared to conduct garrison-related tasks and did not rate the tasks as frequently performed or critical (when interview data suggest the opposite). This indicates there may be confusion over the IO officer's role in garrison.

There is also some evidence from the interviews indicating confusion over the role in garrison. As one IO officer stated, "It was the garrison environment and trying to prove myself

that was the hardest part, that transition. It's really hard to find something that makes you valuable to a commander." This demonstrates that some IO officers are unclear on the IO officer's role in garrison if they are unsure how to demonstrate their value to the commander. If IO officers do not understand the importance of garrison-related tasks, they may be setting themselves up for failure when deployed. Further, data from the interviews suggests that if IO officers do not take the initiative to conduct IO and establish credibility in garrison, they may be marginalized, tasked with things no one else wants to do, and have even more difficulty when deployed because they have not yet established their relevance or built vital relationships.

In addition to the garrison-related tasks described in the survey, interviewees also mentioned other duties performed in garrison such as: ensuring the commander has a communication strategy, developing cultural studies to prepare for deployment, and focusing on the leader engagement piece. Another implication is that as fewer units deploy, the functional area will not survive if IO officers think they do not have a job in garrison.

Because of the confusion over the IO officer's role in garrison, it is not surprising that several interviewees suggested the QC cover the IO officer's role in garrison in more depth. One specific suggestion from an IO officer was to include in the QC an exercise in which students develop a one-year training plan as if they are getting ready to deploy. This would help them better understand the role of IO in garrison and prepare IO officers on how to train in their job. Vignettes could also be used to help illustrate IO officers' role in garrison.

Applying cultural awareness was rated as a frequently performed task by 50% of IO officers, but it is considered critical by 70% of IO officers (see Table 1). IO officers from the 2011 QC were less prepared (60%) than 2012 graduates (70%). Some interviewees stated that previous experience in cross-cultural communication helped them feel more prepared for the IO officer role when deployed. Also, reading cultural studies books was helpful, and on at least one occasion an IO officer got the brigade commander to distribute a particularly useful cultural study book to the entire brigade. Understanding the culture and being able to communicate cross-culturally were considered essential to the IO officer job at brigade. One commander gave the following recommendation:

> One of the things that the PSYOP guys do that's very valuable is they tend to be regionally focused. That's important when you're doing messaging . . . you understand a message that's going to resonate based on [culture]. . . . Regional focus probably makes [IO officers] more valuable, especially as a junior officer.

It is clear that cultural awareness is important when messaging in other cultures, so the IPO may want to consider including more focus on cultural awareness in the QC.

IO officers reported that they do not often participate in design teams (29%) and this was rated as one of the least critical tasks (51%, see Table 1). Therefore, it is not surprising that IO officers graduating from the QC in 2011 and 2012 were not highly prepared to participate in design teams (2011: 35%; 2012: 26%). However, one commander commented that IO officers would benefit from knowing and understanding a little bit about Army Design Methodology (ADM) because "the message has to be tailored for each subcategory of group and often it's a

very very complex environment through all those varied audiences." Other commanders also commented on the complex nature of IO and how many IO officers do not seem to understand the problem, so they are unable to solve it. Therefore, educating IO officers on how to use design may be beneficial.

The most infrequently performed task was using red teaming concepts or understanding the enemy (19% rated this as a frequently performed task; see Table 1). Less than half of IO officers (46%) consider this a critical task. Therefore, according to the survey data, it is of little concern that few 2011 and 2012 QC graduates felt prepared to use red teaming concepts (2011: 15%; 2012: 39%). However, data from the interviews indicate that incorporating more of a focus on understanding the enemy may be useful to help IO officers discern how the adversary is distributing information and effectively using IO. As one commander stated: "[IO officers] have to be able to counter the enemy's [IO campaign]." He went on to describe in more depth:

> [IO officers] didn't understand . . . the wars that we're in involve a number of different battlegrounds. Not just the physical battleground against enemy organizations, but also the psychological battleground…. So, to be effective at exerting influence, we have to be able to identify, understand, and then act against the enemies' subversive campaigns. We don't see these subversive campaigns, let alone contest them effectively. So often times, Information Operations Officers are caught up in the idea of messaging, without really understanding that this is a competition; this is an interaction with enemies on multiple battlegrounds.

One IO officer suggested red teaming concepts may be more useful in an advanced course, after the QC has been completed.

Assessment. Assessment was a hot topic during interviews. When asked how to assess the impact of IO objectives, one commander responded:

> It's a difficult area because sometimes it jumps right out . . . it's obvious to anybody. Other times it can be the info ops were the key to success, but it's not like dropping a bomb and seeing the results. It's a lot tougher. . . . Those who are not "believers" in IO can . . . dismiss the success of [IO], so it is difficult. . . . From a commander's perspective, I don't think we've done a good enough job capturing [IO assessment] over the years. We've been at such a busy pace that, we knew it, sometimes we wrote about it, sometimes we captured it, most of the times we did not.

The question of how to do assessment drew many other comments, as well, but no "right way" of conducting IO assessment surfaced through the survey or interviews, rather, many expressed that IO officers must be adaptive and use whatever information is available. One interviewee painted the picture well:

> We relied a lot on our "radios in a box" [RIAB]. A lot of the call-ins, people responding to the DJs . . . We used the HTS [Human Terrain Systems], the feedback they were getting when they were amongst the population . . . . We used the PRTs [Provincial reconstruction teams], the SLEs they were doing. My commander was very good about

when he came back from his engagements, sharing information that he had gained on those. We had a gentleman that worked in our organization that had sources downtown who would . . . gather information: "word on the street," and he would feed that to me. So, we knew what people were talking about, we knew what leaders were saying, we knew what people . . . [who] were phoning into the radio stations were saying. We had a culture advisor on our staff who I would always run everything through. . . . Polling, the media, what we were hearing in the Afghan press, the international press, information from [SLEs], information from the PRTs, information from the HTS. It sounds like a fire hose coming at you, which is exactly what it was, and you had to sift through all that data and try to look at your MOEs.

Therefore, it is evident that IO assessment is a very complex process.

In the survey, IO officers were asked a general question about how well the QC prepared them to assess IO effects (see Figure 10).

Assessing IO

■ Agree   ■ Neither   ■ Disagree

The QC prepared me to assess IO/IIA effects.
59%   21%   20%

0%   100%
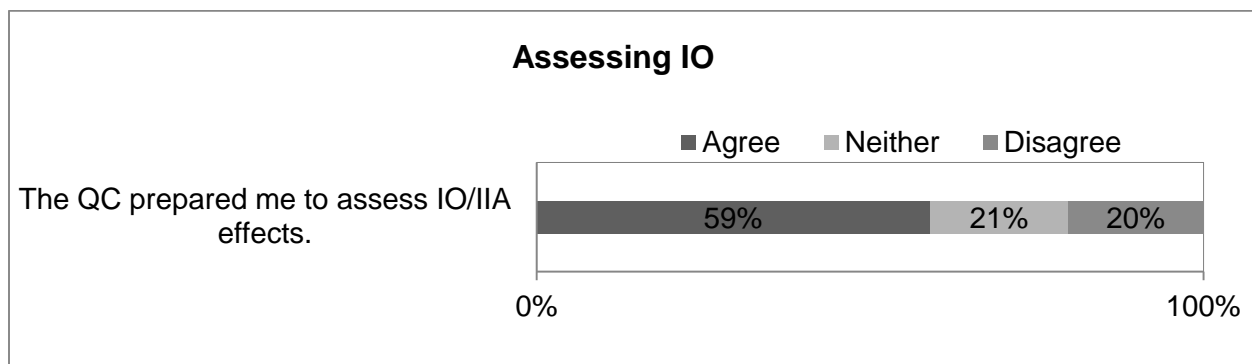
Figure 10. IO officer survey results for how well the QC prepared respondents for assessment of IO.

Again, recognizing that the QC has changed substantially over the years, a break down across different years is illustrated in Figure 11.

17

The QC prepared me to assess IO effects
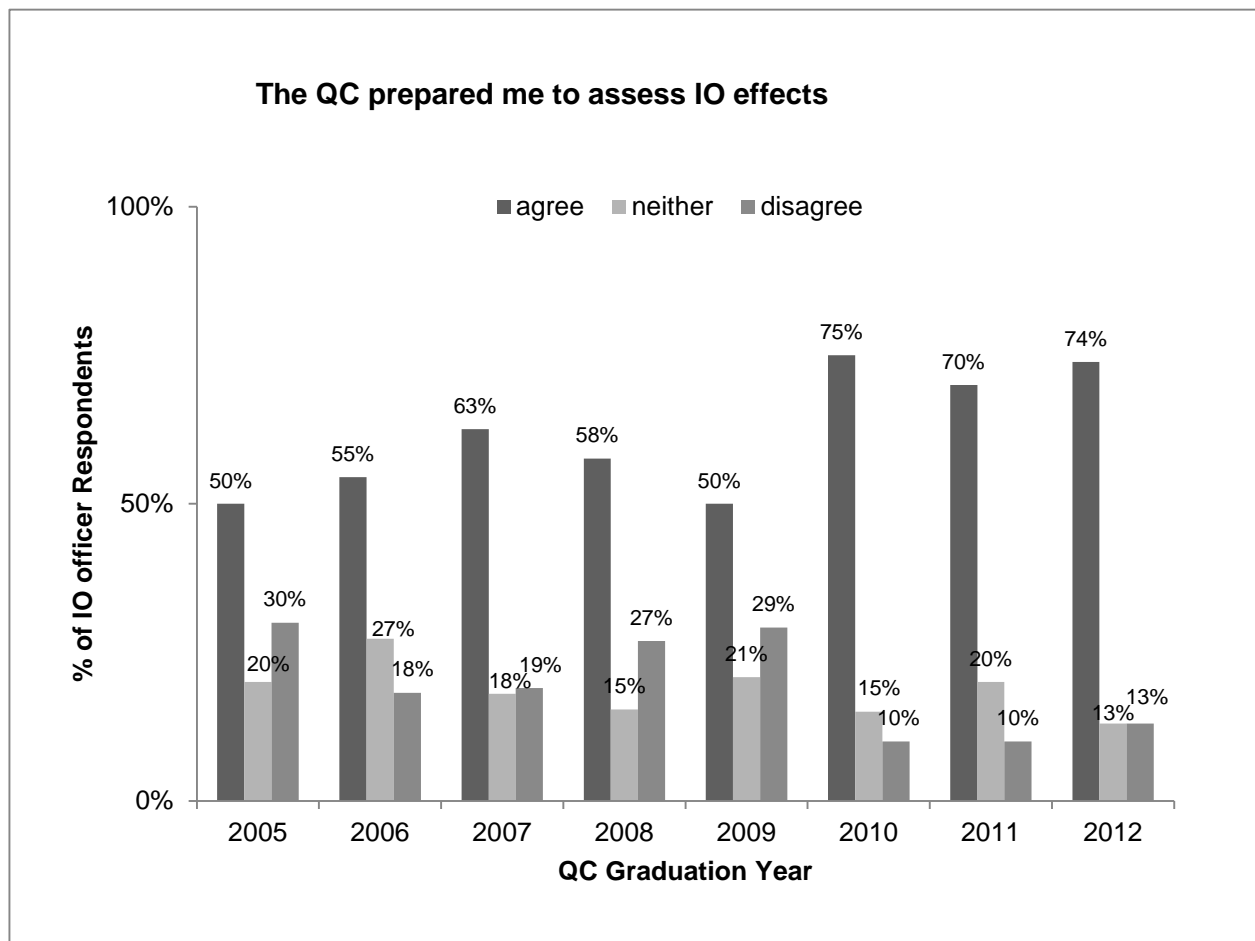
Figure 11. IO officer survey results for how well the QC prepared respondents for assessment by QC graduation year.

In general, levels of disagreement are declining, and there is an increase in preparedness for 2010 through 2012 QC graduates in regards to assessment. Assessing IO effects was the third most highly ranked task in QC preparedness by recent graduates (see Table 1). IO officers were also asked about the frequency and criticality of assessing IO effects. Interestingly, assessing IO effects was ranked as a fairly infrequently performed task (37%, ranking it 12th among all the tasks), yet it is considered by 84% of IO officers as being a critical task (ranking fifth among all tasks).

Further, IO officers were also asked about developing measures of effectiveness/ measures of performance (MOEs/MOPs), another aspect of assessing IO effects (see Table 1). Regarding MOEs/MOPs, 82% of 2012 graduates agreed that they were prepared by the QC to develop MOEs/MOPs for assessment, ranking it second out of all the tasks. This is an increase from 2011, in which 65% of graduates felt prepared. Similarly to the task of assessing IO effects, IO officers overall also reported developing MOEs/MOPs as a fairly infrequently performed task (only 37% rated it as a frequently performed task). Developing MOEs/MOPs was also not one of the top ranked critical tasks performed relative to other tasks, although 79% of IO officers overall agree the task is critical. It could be that assessment is done infrequently because IO officers are unsure how to do assessment, even though for these questions, recent graduates

reported feeling prepared. The survey went into more depth on assessment, which is detailed next.

   Assessment tools and personnel. Drawing from the interviews, a section on assessment tools and personnel utilized when assessing effects in the IE was included in the survey. Overall, less than half of IO officers (43%) thought the QC prepared them to use appropriate tools/personnel when assessing effects in the IE (see Figure 12), noticeably less than the overall 59% of IO officers who reported the QC prepared them to assess IO effects (compare to Figure 10).

Assessment Tools/Personnel

■ Agree   ■ Neither   ■ Disagree

| The QC prepared me to use appropriate tools/personnel when assessing effects in the Information Environment (IE). | 42% | 34% | 24% |

0%   100%
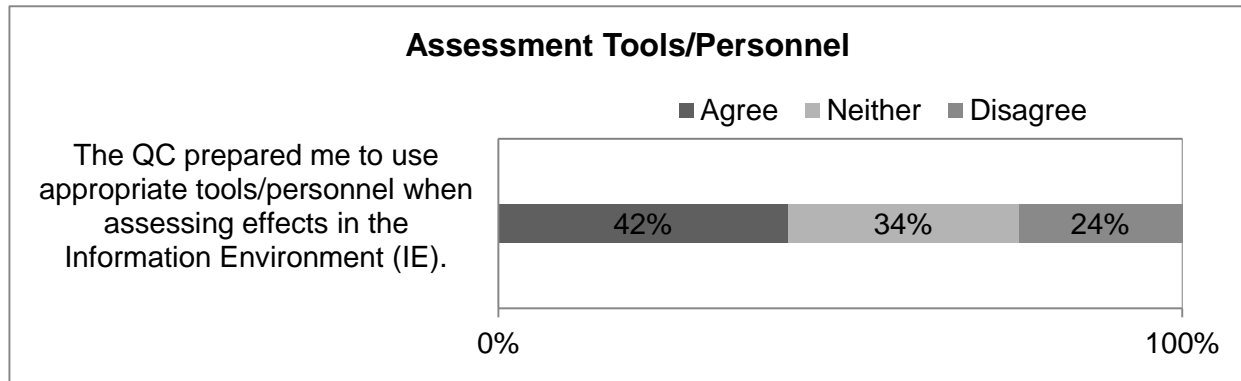
Figure 12. IO officer survey results for how well the QC prepared respondents to use assessment tools and personnel.

   Figure 13 illustrates the break down across the item by QC graduate year. Figure 13 illustrates that IO officers responded differently to how well prepared they felt to use appropriate tools/personnel when assessing effects in the IE. Overall, the highest rating from 2010 was still only 69% favorable, which is not overly favorable. It does appear that the percent of IO officers who *disagree* with this statement has decreased in recent years, which translated to higher neutral ratings. Neutral ratings may mean that those graduates are still unsure how well the QC prepared them because they have not had as much time in an IO officer position to determine their preparedness.

The QC prepared me to use appropriate tools/personnel when assessing effects in the Information Environment (IE)

■ agree ■ neither ■ disagree
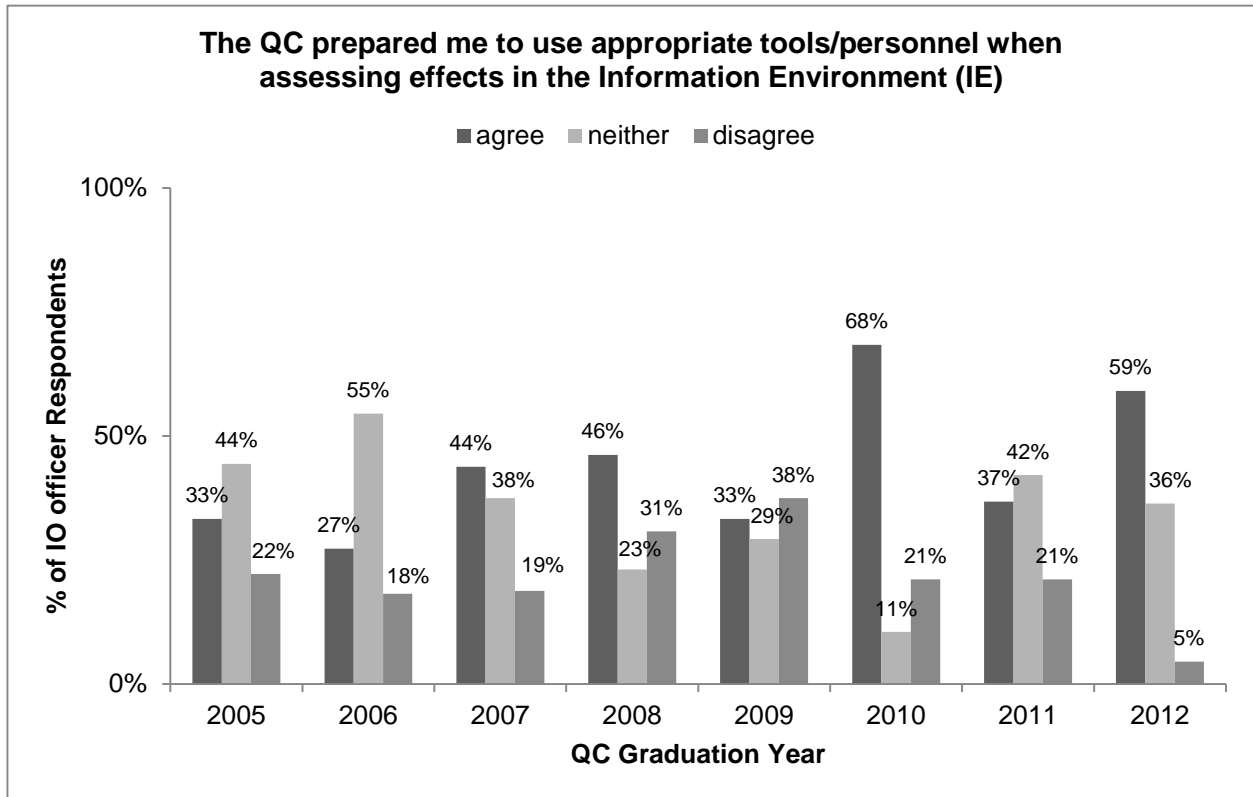
Figure 13. IO officer survey results for how well the QC prepared respondents to use assessment tools and personnel by graduation year.

It is interesting to note that IO officers responded more favorably to the more general question: "The QC prepared me to assess IO effects," and less favorably to the question "The QC prepared me to use appropriate tools/personnel when assessing effects in the IE." The more general question may indicate that IO officers understand assessment and know "in theory" how to assess IO effects, but when asked a more practical question about HOW they assess IO effects using tools and/or personnel, they indicate less understanding.

As in the previous section, IO officers were asked to rate the assessment tools and personnel on frequency, criticality, and QC preparedness (see Table 2).

Table 2

IO Officer Survey Results for Frequency, Criticality, and QC Preparedness of Assessment Tools and Personnel

Assessment tools and personnel	Frequency % Fav	Rank	Criticality % Fav	Rank	QC preparedness 2011 % Fav	Rank	QC preparedness 2012 % Fav	Rank
Military Information Support Operations (MISOs)	80	1	91	1	53	3	74	3
Civil Affairs Officer (CAO)	68	6	90	2	40	6	61	8
Intel Analysts	76	2	88	3	30	10	57	9
Leader Engagements (e.g., SLEs, KLEs)	70	5	86	4	70	1	78	2
Atmospherics	74	3	86	4	35	7	48	11
MOEs/MOPs	65	7	85	6	65	2	83	1
Public Affairs Officer (PAO)	72	4	83	7	50	4	74	3
Surveys	51	8	74	8	35	7	44	12
Patrols	50	9	74	8	25	12	39	13
Cultural Support Teams (CSTs)	37	11	73	10	25	12	65	7
Human Terrain Teams (HTTs)	45	10	72	11	35	7	70	5
Female Engagement Teams (FETs)	26	14	64	12	30	10	70	5
Operations Research Systems Analysts (ORSAs)	36	12	55	13	20	14	22	15
Radio in a box (RIAB)	32	13	47	14	45	5	57	9
Narrative wheel	11	15	36	15	15	15	35	14

Note. % Fav = Percent Favorable; MOE = Measures of Effectiveness; MOP = Measures of Performance.

The most frequently used assessment tools and personnel reported were MISOs, Intel Analysts, atmospherics, PAOs, and leader engagements. The assessment tools and/or personnel that were rated the most critical were MISOs, CAOs, Intel Analysts, leader engagements, atmospherics, MOEs/MOPs, and PAOs. The following section highlights strengths and areas of discrepancies either within survey ratings or between the survey and interview data.

Several areas were strengths in that they were rated critical, frequently used, and recent QC graduates felt prepared to use them. As shown in Table 2, these included MISO and PAO personnel, leader engagements, and MOEs/MOPs. Despite MOEs/MOPs being a point of convergence within the survey data, one IO officer commented on how to improve the development of MOEs and MOPs:

> I think the most effective improvement could be the… amount of time and quality of thought put into developing [MOEs]…. Really what you've gotta do is… really put a lot of thought, ok, what are the three to five really good [MOEs]…. It needs to be a collaborative process with senior staff officers, to include either the Chief of Staff, or the S3, or the commander and other key staff officers, primarily the S3 and the S2, to really determine really good [MOEs]. I think we get into a rush defeating the process and we kind of leave ourselves lacking on the quality of the product that we deliver when we are so focused on getting it done in time, that we don't put forth the quality. And if you don't have a quality [MOE]… you're not really measuring what you want to measure.

One commander agreed that IO officers need to be better trained on metrics, but went on to explain that

> The metrics have to be sort of discrete; they have to be tied to campaign objectives. So, what is the "so-what?" Tracking a metric should help you gauge whether or not you are making progress toward a clearly defined objective.

Finally, another IO officer noted that the MOE and MOP process tends to be too focused on figuring out *why* something happened, which takes time and resources, leaving the assessment process lagging behind. Instead, he suggested that "MOEs need to focus on 'What do we want to have happen?' instead of 'Why did something happen?'"

There were also several points of divergence in the survey regarding assessment tools and personnel. CAOs, intel analysts, and atmospherics were all rated as critical and frequently used, but fewer recent QC graduates felt prepared to use them (ranging from 35% to 61%: see Table 2). One IO officer that conducted assessment through atmospherics stated that atmospheric collection teams were the best method for conducting IO assessment because "they are the least touched by any of the elements that are actually executing, so you can get some of the better truths – a better view of what the population believes." Therefore, the QC could facilitate more familiarity with the roles of CAOs, intel analysts, and using atmospherics during assessment. Some ways to facilitate familiarity could be providing points of contact (POCs), resources, and websites to facilitate self-study topic for IO officers.

Another point of divergence was the use of Radio in a Box (RIAB). RIAB was not considered critical or used frequently (see Table 2), but some IO officers stressed its usefulness in Afghanistan. However, when one IO officer was asked if he was trained on using RIAB before he deployed, he said "On the job; I figured it out, and my PSYOP planner helped me. We got very good at it, but I wish I would have known that from day one, instead of six months into it." One explanation for the weak survey data in support of RIAB could be that RIAB is only useful in specific situations or is not yet widely used.

Further, use of the narrative wheel is a point of divergence between the survey and interview data (see Table 2). In the survey, the narrative wheel was not considered critical by most and was not frequently used. However, some interviewees had high praise for the narrative wheel, so the survey ratings may reflect lack of familiarity with the narrative wheel, more so than its usefulness. Interviewees who discussed the narrative wheel also focused on the importance of ensuring the narrative or story is resonating with the target populations as a means of assessing IO effects. For example, one IO officer explained,

> I think mission narrative is the proper structure for building an [IO] approach to supporting your mission. . . . the real trick lies in sensitizing as many feedback mechanisms as you can and paying a great deal of attention to indicators that your narrative is in fact resonating. Mostly that's a question of reflection. For example, we set up a semi-non-attributable radio station. We ran call-in shows. What we listened to was how often did we hear echoes of our narrative in what people had to say back in the call-in show.… How often in meetings with the governor did we hear him telling portions of our story?

Therefore, the narrative wheel may be useful in assessment moving forward, but more research would help validate its usefulness.

General assessment issues. As mentioned above, assessment drew a lot of discussion during the interviews. In general, one IO officer had a cynical view:

> . . . as soon as you say assessments [to a commander] they're like, "yeah, whatever" because so many guys have tried to figure [assessment] out in the last couple years and nobody has figured it out. . . . commanders have sunk huge amounts of time and effort into figuring something that hasn't given any pay back.

Other IO officers mentioned that assessment is an Army problem, not an IO problem. One IO officer explained that the disconnection between the tactical level with division and Corps levels exacerbates the assessment problem because data is collected at the tactical level, but the resources to analyze the data are at higher levels.

According to the data, IO officers do not receive enough education and training in assessment. Numerous IO officers stated that the QC needs to spend more time on assessment and go into more depth to help IO officers prepare – especially if IO officers are going to be sent straight to a brigade S7 job after completing the QC. As one IO officer explained,

[I] was not prepared [after QC] as good as I would've had to be if I went to a brigade. With where I went at a division, was taught at division, really learned at division with higher . . . oversight how to really do assessments. That's really one of those risks if you send someone straight out of the [QC] to a brigade they don't have the experience working within this field to assess what they're doing.

Another IO officer stated,

They did bring in some guest speakers to talk about assessments – and they were brilliant people, but they did not know how to present to the class at a non-Ph.D. level. It's a very tough subject, and to really get people to the point where they can honestly assess what they're doing, we could probably spend a whole week on that.

Along these lines, one IO officer had these thoughts:

I think you leave the [QC] understanding assessments, I don't think you leave the course understanding how to employ them. . . . They are familiar with what a [MOP] is. They are familiar with what a [MOE] is, but what I think they need more of is more practical exercises in that.

Therefore, the QC may benefit from developing an assessment practical exercise and incorporating lessons learned for assessment into the curriculum. In addition, one IO officer suggested that the IPO reach out to behavioral civilian counterparts to see what they do to assess. He especially focused on the benefits of finding out what marketing firms are doing because they also assess behavior, and then find ways to translate what they do to a military setting.

Long-term nature of assessment. One of the most commonly mentioned misconceptions with IO assessment is the timeframe: IO assessment takes time – interviewees stated they think good IO assessment takes anywhere from a few months to 18 months or even several years. One commander interviewed went even further:

Measuring the impact on the enemy is a very squishy gray area that I'm not sure anybody has quantified. . . . When you think about [IO] . . . are you truly going to influence an enemy guy who is currently fighting you? You might some, but to what extent? Is that really the target? Or is it the family and the offspring of that fighter? If so, it might be an entire generation before you see the result.

Despite acknowledgement of the long-term nature of IO assessment by some of the commanders interviewed, IO officers and commanders noted that many commanders only think kinetically and are used to being able to instantly assess the effects (e.g., dropping a bomb). This frame of reference gives some commanders and staff officers unrealistic expectations for IO assessment because the results are not immediately apparent: "If it's not immediate to some people, it's not important" (IO officer). Therefore, many IO officers feel that others do not place much value in IO assessment, which highlights the issue of educating the force on IO again.

Another issue that arises from the long-term nature of IO assessment is the difficulty of building assessment into exercises because of time constraints. This inhibits the practice of assessment by IO officers and the commander and staff as a whole. Therefore, the Army would benefit from finding a way to build IO assessment into exercises or developing a simulation for assessing IO effects.

Because of the long term nature of IO assessment, another issue faced is that "You've got twelve months on the ground, and a lot of things you're assessing are actually going to go to the next person who replaces you" (IO officer). This makes the hand-off from one IO officer to the next extremely important, yet it is affected by many factors, including the next command's plans and goals. Overall, interviewees expressed that the hand-off to the incoming IO officer is not usually done well because of various constraints. Another IO officer stated,

> That's a problem that's way bigger than IO. Because it has to be coordinated across the headquarters. And what we have done as an Army, and it's unfortunate that in ten years we haven't learned it, every headquarters that has deployed has tried to figure out the assessments problem and done it all by themselves, and by the time they got ready to redeploy, they probably had something that was kind of close that made the commander happy even though he knew it wasn't right, but it gave him some information, and then as soon as they left, a new headquarters came in and said, well nobody's ever done an assessment here, so they started the whole process over again. And after ten or twelve iterations, over the past ten or twelve years, we haven't gotten anywhere.

He went on to suggest, "there's got to be some other kind of support mechanism Army-wide that's a common assessment database and builds a common assessment type product over time."

One IO officer suggested the IPO try to get a access the database that has all the old APA reports archived as a way to look at assessment over time. Another suggestion came from an IO officer who mentioned the Joint Improvised Explosive Device Defeat Organization (JIEDDO). He explained that one of his "key sources of information" when he was deployed was someone from JIEDDO who had been in the Area of Operation (AO) for three years, allowing for some continuity when it came to assessing the area. "But it was just an organization that was already there in place, focused on one problem which was defeating the IED threat. We haven't done something like that as an Army to develop something on assessment." He went on to suggest the Army should be working on an organization to handle assessments so that the Army is prepared for the next conflict.

Manning and integrating assessment. Another issue with IO assessment is that IO officers tend to do a lot of their own assessments, yet they are not staffed and manned for it. When asked about understanding data manipulation and analysis (one aspect of assessment), one IO officer explained that there is no time in the QC, nor in the IO officer job to do data analysis (although some IO officers and commanders thought IO officers could benefit from a better understanding of data analysis). Therefore, many IO officers turn to others for help with assessment, as described above. As one IO officer stated, "That's one of the beauties of forming an [IO] cell… [Assessment] requires a lot of leverage with the guys in the [IO] cell with a

background in that." More detail about the IO cell was discussed above, but leveraging others for assessment purposes is another benefit of organizing the IO cell.

Another important point about IO assessment is that it should not be done in isolation or it will not be effective. One IO officer said that to do IO assessment, it should be nested within the commander's assessment:

> then [we can] leverage the capabilities that we need to assess whatever we set out to be our objectives…. If we don't have our portion of the assessment integrated with the commander's assessment we're not going to get any feedback.

Another IO officer explained,

> [The IO] stuff is just a piece of the assessment that will give the commander a picture of what's going on. If we do our [assessment] by ourselves, it looks disconnected and doesn't tell the commander everything he should know.

Despite the many issues with assessment, one commander offered a glimmer of hope on this final point:

> Most people would tell you and I agree with them, it's difficult to find a metric sometimes. . . . If your intent is to meet results and your intent is to support an overarching operation, then at times it's difficult inside the current MDMP to determine what kind of effects you're having. Having said that . . . when it's well integrated, and thoughtfully presented to the commander then I think it has an impact, not only on how we're thinking through a planning cycle and a [MDMP] cycle, I think it allows us to really think hard on who we want to influence and why we want to influence them. I think that whole process in itself regardless of what ultimately the metric is, or whether the operation was successful, I think there is benefit to just going through that process.

Information-related capabilities (IRCs). In the survey, IO officers were asked a general question about how well the QC prepared them to work with the various IRCs. Just over half of IO officers (56%) think the QC prepared them to coordinate with the IRCs (see Figure 14).

IRC Coordination Preparedness

■Agree   ■Neither   ■Disagree

The QC prepared me to coordinate with the Information Related Capabilities (IRCs).

| 56% | 24% | 20% |

0%   100%
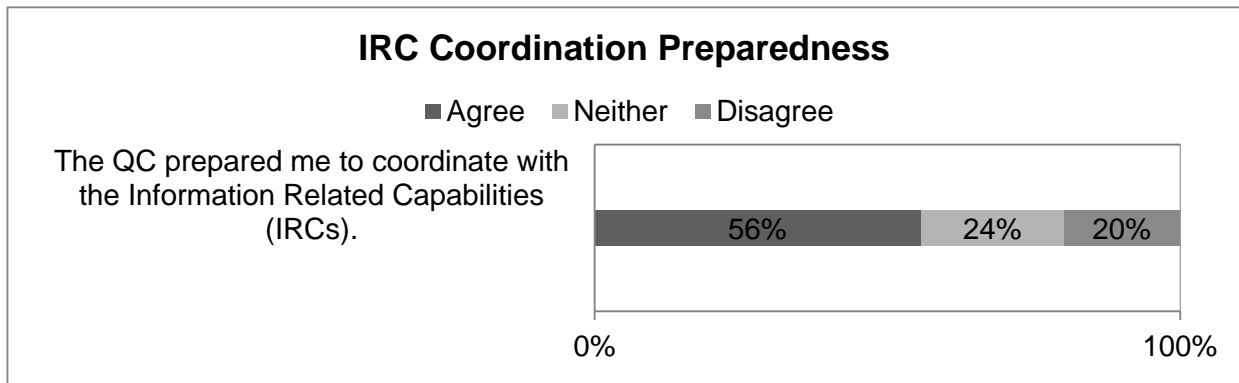
Figure 14. IO officer survey results for how well the QC prepared respondents to coordinate with the IRCs.

Again, the next figure shows a break down across different graduation years to address the evolving nature of the QC (see Figure 15).

The QC prepared me to coordinate with the Information-Related Capabilities (IRCs)

■agree   ■neither   ■disagree
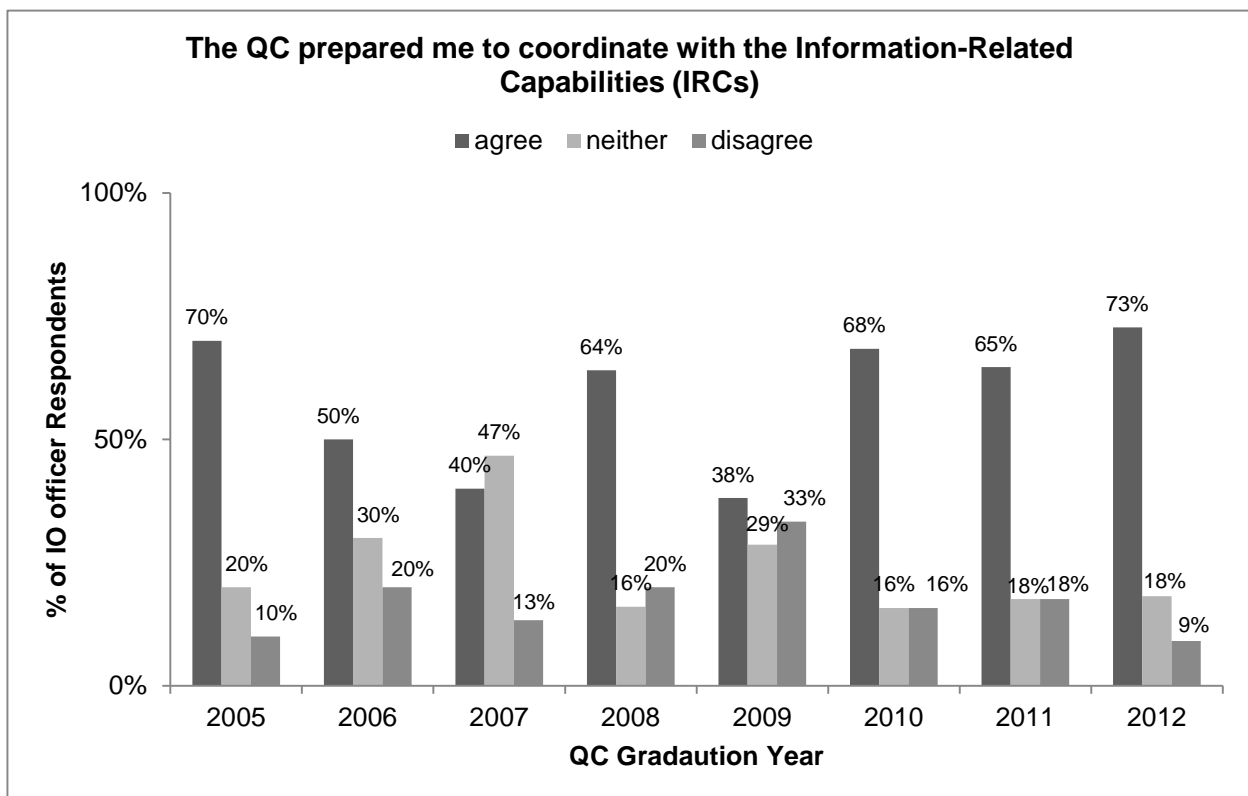
Figure 15. IO officer survey results for how well the QC prepared respondents to coordinate with the IRCs by graduation year.

Recent QC graduates are less dissatisfied with how well the QC prepared them to work with the IRCs than in most previous years, but overall satisfaction could be improved. To get a more complete picture, IO officers were asked to rate how often they work with the IRCs, how critical it is to work with each IRC, and how well the QC prepared recent graduates to work with the IRCs (see Table 3).

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Table 3

IO Officer Survey Results for Frequency, Criticality, and QC Preparedness to Work with the IRCs

Information Related Capabilities (IRCs)	Frequency		Criticality		QC preparedness			
					2011		2012	
	% Fav	Rank	% Fav	Rank	% Fav	Rank	% Fav	Rank
Military Information Support Operations (MISO)	81	2	94	1	75	3	83	2
Public Affairs (PA)	90	1	91	2	80	2	83	2
Military Deception (MILDEC)	55	5	84	3	55	7	70	7
Civil Affairs Operations (CA)	63	4	83	4	45	8	70	7
Soldier and Leader Engagement (SLE)	64	3	82	5	70	4	86	1
Cultural Advisors	48	9	76	6	70	4	78	5
Special Technical Operations (STO)	50	7	76	6	20	14	44	12
Cyberspace Operations (CYBER)	45	11	72	8	25	11	39	13
Electronic Warfare (EW)	50	7	70	9	35	9	65	9
Combat Camera (COMCAM)	48	9	67	10	70	4	78	5
Operations Security (OPSEC)	54	6	66	11	90	1	83	2
Physical Attack	37	12	60	12	25	11	52	10
Presence, Posture, and Profile	32	13	55	13	25	11	39	13
Physical Security	30	14	47	14	30	10	52	10

Note. % Fav = Percent Favorable. Survey items for Table 3: "How frequently/critical/prepared were you to work with the following IRCs?"

The IRCs IO officers reported working with most frequently were PA, MISO, SLE, CA, and MILDEC. Similarly, the most critical IRCs were MISO, PA, MILDEC, CA, and SLE.

The following section highlights strengths and areas of discrepancies either within survey ratings or between the survey and interview data. As shown in Table 3, MISO, PA, and SLE highlight the points of convergence within the survey data because they are all rated critical, frequently used, and recent QC graduates felt prepared to use them—see Military Information Support Operations (MISO), Public Affairs (PA), and Soldier and Leader Engagement (SLE). In the interview data, many IO officers noted engagements to be one of their primary duties, although one IO officer noted,

> I understand the importance of engagements in the overall synchronization of communications. However, we as a community should not pigeon-hole ourselves into being 'Engagement' officers only – that essentially makes us party planners, and that's not as useful as it may seem.

MILDEC and CA were also rated in the top five for criticality and frequency, yet less recent QC graduates felt prepared to use them (see Table 3). This is a point of divergence which suggests that the QC may need to cover MILDEC and CA in more depth or provide more resources to facilitate understanding. Resources could include providing POCs within MILDEC and CA and providing access to IRC websites for QC students and IO officers in the field to find more information.

Another point of divergence in the survey data involves COMCAM and OPSEC. While many recent QC graduates felt prepared to use COMCAM and OPSEC, they were not rated by as many IO officers as being relatively critical or used frequently (see Table 3). Therefore, these topic areas may not need to be covered in as much depth in the QC. Decreasing time spent on COMCAM and OPSEC could free up time for other topics IO officers' recommend covering in more depth, as previously mentioned.

Qualitative data from interviews and open-ended survey questions suggested that the QC could benefit from going into more depth on the IRCs to facilitate the preparation of IO officers to work with the IRCs on the job. The data from the survey can provide guidance as to where to place the most emphasis (i.e., MILDEC, CA). A few IO officers recommended the QC incorporate the IRC courses that 1st IO Command teaches into the IO officer QC to allow more time to focus on a specific IRC. As one IO officer stated,

> The 12-week [QC] course was good. However, it didn't prepare me to utilize some of the ancillary IRCs. I get that it's the IO officer QC and not the MILDEC, or OPSEC, or whatever QC, but some more of those classes integrated into the overall course would be useful. It's not as easy as one might think to get the 1st IO training; they really only offer most of it to people in their command, and it can be difficult to get [Mobile Training Teams (MTTs)] scheduled.

This concludes the feedback specific to the IRCs.

QC general comments. Interview comments have been incorporated with the survey data throughout the Training and Education section, but there were other QC issues raised in the

interviews that were not directly related to any survey items. Therefore, the following section will highlight the other main issues mentioned about the QC.

Many interviewees had positive things to say about how the QC prepared them to be an IO officer. In the interviews and survey, IO officers mentioned that the QC has evolved over the years. One IO officer explained,

> One good thing about the school is they do read the [student feedback from surveys] and they do improve based on student feedback. . . . It's a much different course than when I went through. We're turning out S and G7s much better than we were 3-4 years ago.

Another IO officer stated that the QC, "set the conditions for me to be able to have changes in thought process that I needed." Another IO officer took the onus off the QC to completely prepare IO officers because many aspects of the job require firsthand experience to learn, rather than classroom instruction.

While some had praise for the QC, others felt there is room for improvement. One IO officer explained,

> My expectation of the course and what happened to me in the course were two different things. I had to do a lot of research before I arrived at my assignment. I did a lot more of my own education, and when I got here, I literally started talking to the capabilities and saying, "Hey you need to teach me what you do," when [the QC] had three months to do that.

Another IO officer who had more experience coming into the QC noted that, "From the perspective of some of the other students in the course who had zero experience going into the course, you're definitely drinking from the fire hose."

There are differing opinions on what the QC should teach and how it should be taught. Before going into the details of some of the QC suggestions, one issue that may affect the differing opinions is the amount of experience a prospective IO officer has before entering the QC. As one IO officer explained,

> Now, we're starting to bring in young captains. It used to be majors . . . who've been around awhile. . . . So, I think a more advanced level school may be needed now. . . . That certainly changes the pace of the class [having lieutenant colonels and young captains in the same class].

When there is that much of a wide range of experience in the classroom, it is challenging to get into depth as much as is needed. Thus, one argument for an advanced course is that it could help level out the experience of the students so instructors can cover the material in the appropriate depth. Other IO officers also thought an advanced course would be beneficial. One IO officer likened an IO officer advanced course to the continuing education of a doctor or lawyer and stressed that it must be required or many units would not allow IO officers to attend. Finally,

another IO officer suggested an advanced course be attended after two assignments or as an O5. He said,

> I think there needs to be an advanced course. Probably one that you go to after two assignments as an IO officer or as an O5. . . . I think that course needs to be very academically rigorous, and it should be a weed out course so you're separating those that have potential for O6 and perhaps you're eliminating those that should not go on to be O5s in the branch. I think it should incorporate some red team concepts, perhaps some advanced planning kind of like they do at SAMS, and a sort of a re-addressing a lot of the doctrine, and making sure that at that level you are masters of your own doctrine.

The discussion of IO officer experience when coming to the QC also raises the issue of the IO officer career path because the amount IO officers feel prepared by the QC may depend on their first assignment. For example, if a new IO officer is sent to a division-level assignment first, he/she may be able to round out his/her QC education through experience and mentorship within the division. On the other hand, an IO officer sent straight to be the S7 at a brigade may not have the same resources and thus feel less prepared to do his/her job. Issues of talent management and the IO officer career path will be discussed in more detail in the Personnel section.

Moving into more specific suggestions, several IO officers expressed they would like the QC to focus more on *HOW* to do things, rather than *WHAT* they will do. There was a similar sentiment among IO officers when talking about their dissatisfaction with the new FM 3-13 (see above, in Doctrine section). Building on the idea of showing "what right looks like," IO officers described the need for more examples and vignettes in the QC and including more practical exercises. One commander in an interview stated:

> Maybe some successful vignettes from down range might be useful to open their blinders, open their thoughts, and I think if they brought those with them from the schoolhouse to their unit it might give them something to advertise their capability.

Specifically, interviewees called for more practical exercises to help IO officers learn and practice assessment. Another IO officer suggested that templates from other IRCs would be useful so IO officers understand the other enablers capabilities and learn how to integrate it all. In addition, one commander suggested the QC include

> a practical exercise where they have to either build a plan or go through a targeting cycle. They identify a problem set, there is an operation to resolve that problem, and then they have to come up with themes and messages that are nested to PAO and MISO and synchronize in support of that operation.

There were also some critiques of current exercises at the QC. One IO officer critiqued the MDMP exercise because students had to play roles for jobs they will never perform. He said, "Why aren't members of the [QC] playing the role of the division staff leads and primaries and then directing the IO officers in the classroom to produce their doctrinal products that they have to produce for that?"

Another topic of discussion was time usage in the QC. One IO officer noted that,

> At CGSC they keep us till about 1500 and you have a tremendous amount of reading and that's about right. [The QC] could have kept us for 2-3 more hours per day and given us even more homework. This goes along with increasing the academic rigor, increasing the selection criteria, and making it a tough and prestigious course.

Including more hours of instruction would allow for time to get into more depth on the various subjects mentioned above, such as assessment and the IRCs. It is important to note that these suggestions were unsolicited comments made by IO officer interviewees and in open-ended comments on the IO officer survey; these issues were not presented in the survey, and thus it is difficult to conclude if a wider audience of IO officers would agree. The IPO may want to investigate further before implementing any changes.

    Combat Training Centers (CTCs). IO officers were asked several questions about the CTCs and how they support IO. Responses were heavily neutral toward the CTCs' ability to support IO training capabilities, which may indicate low expectations of the CTCs from IO officers or a lack of familiarity with the CTCs (see Figure 16).

Combat Training Centers

■ Agree ■ Neither ■ Disagree

	Agree	Neither	Disagree
CTCs enable IO officers to be an integral part of mission planning	34%	47%	19%
CTCs Provide IO officers opportunity to work with relevant IRCs	25%	51%	24%
CTCs use enough data supporting scenarios to drive IO/IIA planning.	22%	54%	24%
CTCs use orders that create conditions to drive IO/IIA planning.	33%	49%	18%
Combat Training Centers (CTCs) create conditions to drive IO/IIA planning.	34%	47%	19%

0%   100%

Figure 16. IO officer survey responses to IO-related questions about the CTCs.

    The interviewees expanded on several issues with the CTCs. The most commonly mentioned concern was that the non-lethal side is not showcased at the CTCs. One IO officer said,

> the problem is . . . role players are not providing the effects, so you have this S7 and these IRCs doing this great planning process, and they're executing, but if the role players are

not providing the effects, essentially you're not selling the capability to the maneuver commander because the maneuver commander is not seeing the effect on the environment; he's not seeing the dividend.

One commander agreed, stating that, "In training, we . . . don't stimulate the non-lethal piece of the battlefield and the information ops, and it's because . . . I don't get any reward for doing IO." However, he stressed that, "we need to make sure that we don't wait until we get into Iraq and Afghanistan until we realize the value [of IO officers]."

An additional issue that was discussed was IO officers serving as observer coach trainers (OCTs) at the CTCs. Suggestions were made that after completing tactical time at the division and brigade levels, IO officers could provide valuable input at the CTCs. As one commander put it, "Going to a CTC is an extremely high pay-off assignment for the Army. After they've done a brigade job, to go down there and serve as a trainer/mentor for other new IO officers I think is a high pay-off." However, there was also a concern that some IO officers are being sent to the CTCs as OCTs before gaining tactical experience. It is important to send strong, experienced IO officers to the CTCs so they can provide valuable feedback from personal experience to the IO officers coming through for training.

Along the same lines, some concerns about what is being taught at the CTCs were raised. One past issue was that an update to the IO doctrine had not been published, so what was being taught at the schoolhouses and CTCs was out of date. One suggestion that was raised was for the IPO to check what is being trained at the CTCs and observe exercises when they are not teaching the QC so they can provide input into how to better train the capability.

This concludes the information collected that was specifically related to Training and Education.

Materiel

Program of Record (POR) tools, products, and processes. The survey asked about the POR tools, products, and processes IO officers use in their jobs. IO officers were asked how well the QC prepared them to use tools, products, and processes, as shown in Figure 17.

POR Tools, Products, Processes

■Agree ■Neither ■Disagree

The QC prepared me to use…	45%	30%	25%
The QC prepared me to…	43%	28%	29%
The QC prepared me to…	61%	25%	14%

0%   100%
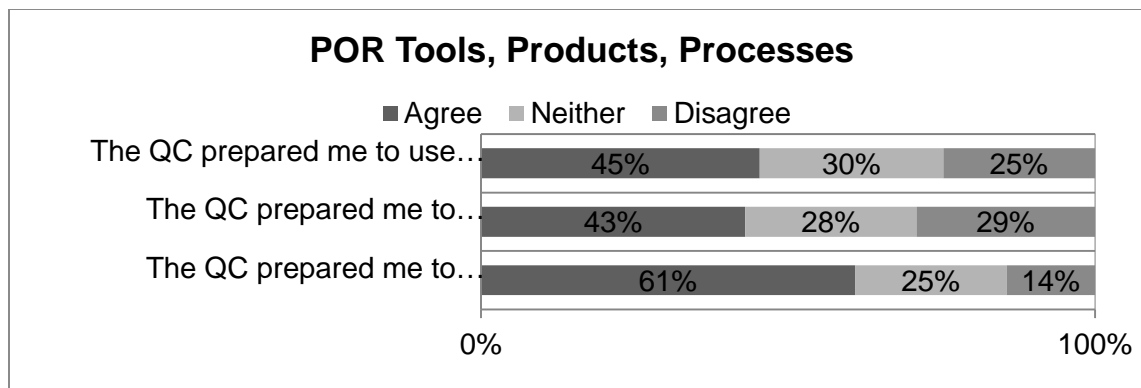
Figure 17. IO officer survey responses to how well the QC prepared them to work with POR tools, products, and processes.

More IO officers felt prepared to participate in the processes needed to do their job (61%), than they felt prepared to use the tools and produce the products needed (45% and 43%, respectively). The following three figures show each item broken down by QC graduation year.

The QC prepared me to use the TOOLS I need to do my job

■agree ■neither ■disagree

Figure 18. IO officer survey responses to how well the QC prepared them to use the necessary tools by QC graduation year.

Figure 19. IO officer survey responses to how well the QC prepared them to produce the necessary products by QC graduation year.

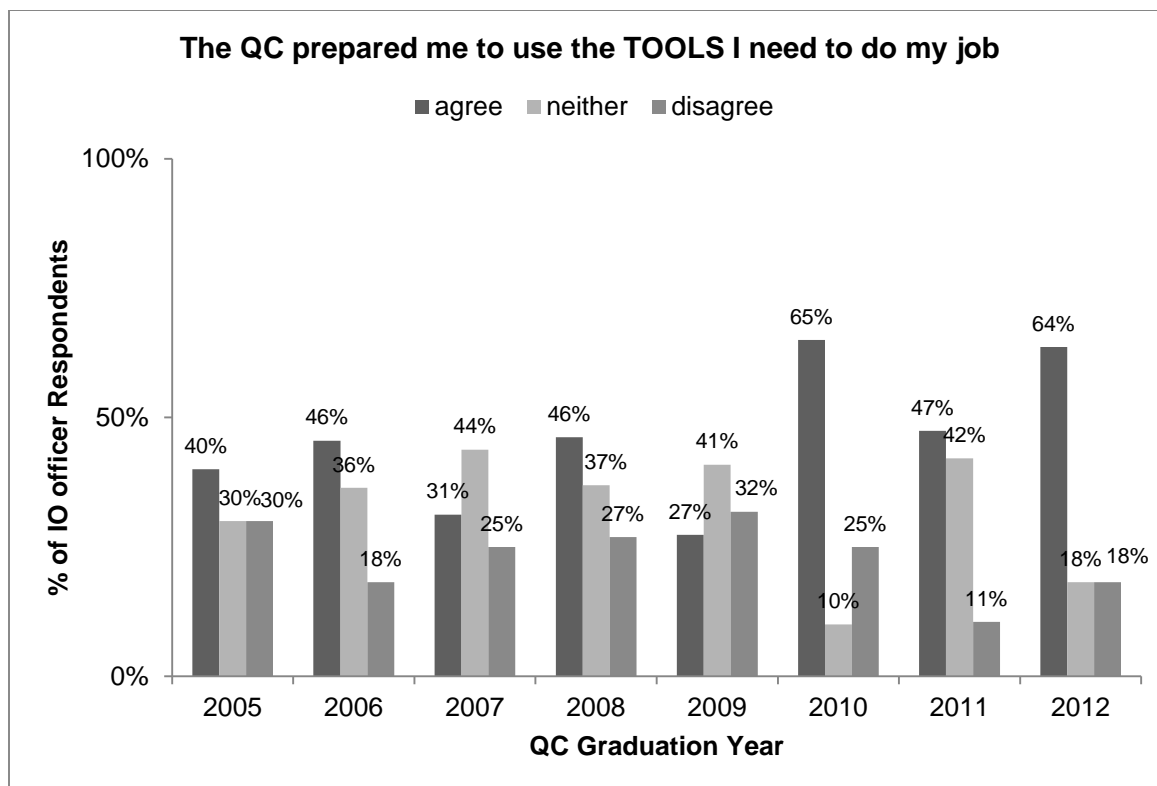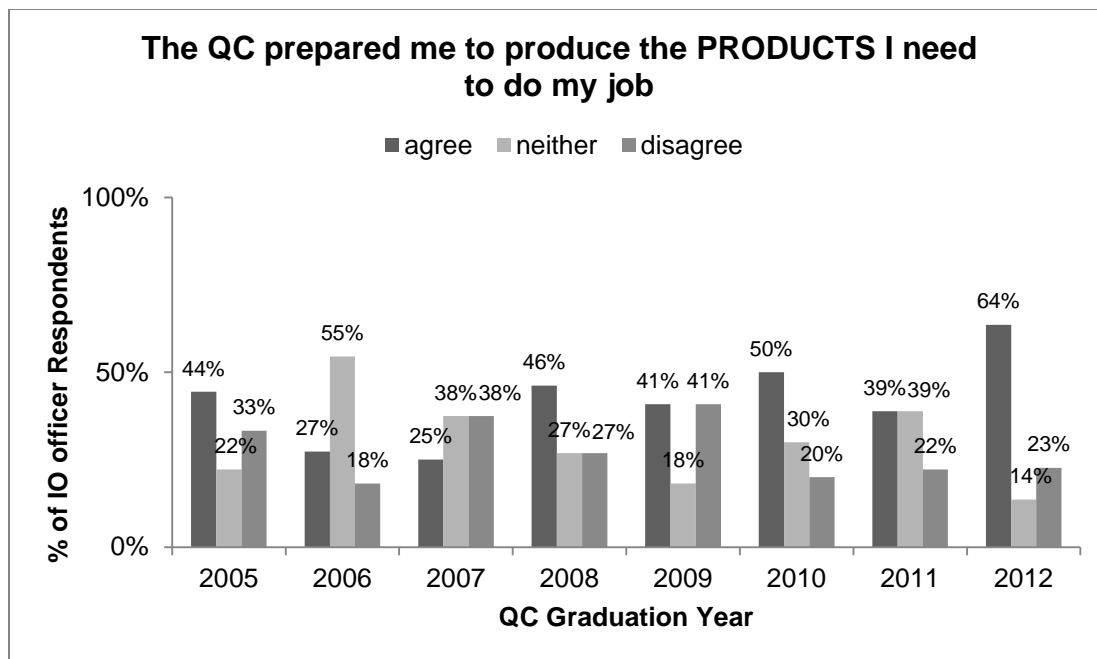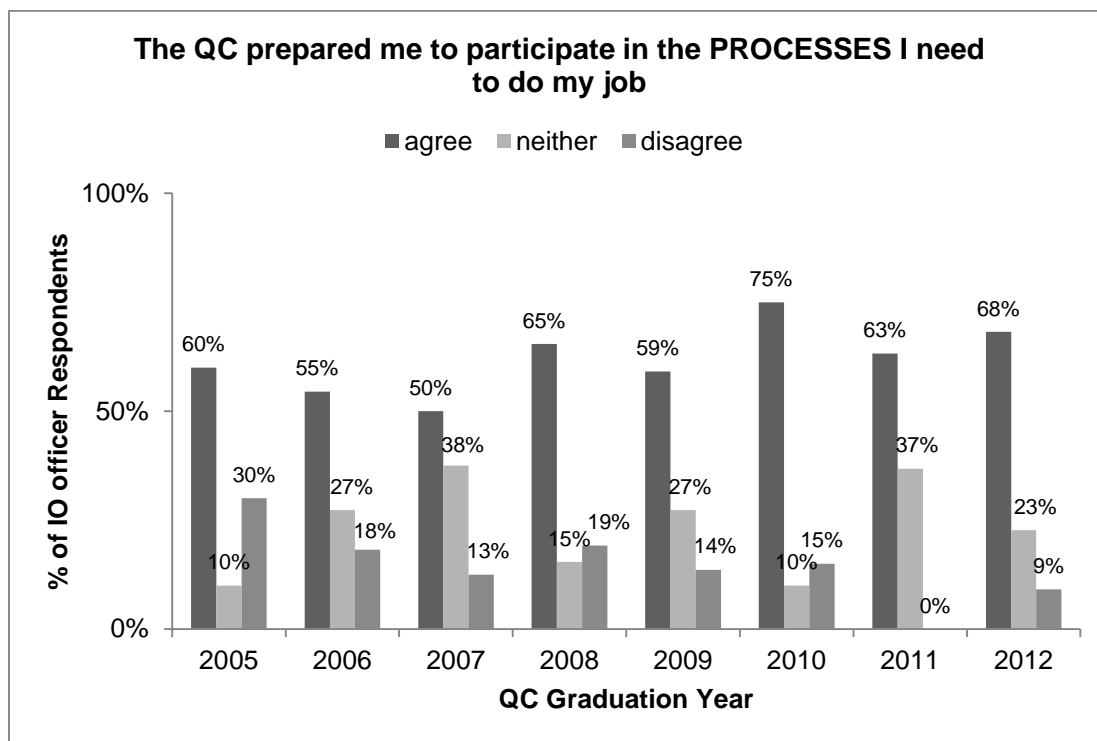*Figure 20.* IO officer survey responses to how well the QC prepared them to participate in the necessary processes by QC graduation year.

Examining the breakdowns by QC graduation year also illustrates that more IO officers felt the QC prepared them to participate in the processes needed to do their jobs than use the tools and produce the products needed to do their jobs. Also, the disagreement levels are lower for processes than for tools and products.

As with the previous sections, IO officers were asked to rate the frequency with which they use the tools, products, and processes; their criticality; and how well the QC prepared them to use each. Table 4 shows the results for POR tools, products, and processes.

Table 4
IO Officer Survey Results for Frequency, Criticality, and QC Preparedness to Work with POR Tools, Products, and Processes

Tools, products, and processes (POR)	Frequency % Fav	Rank	Criticality % Fav	Rank	QC preparedness 2011 % Fav	Rank	2012 % Fav	Rank
Targeting	71	5	94	1	45	10	61	11
Mission analysis for Military Decision making Process (MDMP)	78	1	93	2	70	2	86	2
Course of action (COA)	75	3	93	2	70	2	86	2
Development for MDMP Assessment	59	9	92	4	45	10	74	7
COA analysis for MDMP	72	4	91	5	65	5	87	1
COA comparison for MDMP	70	6	90	6	65	5	83	4
Open source media	77	2	88	7	55	9	70	10
Orders production for MDMP	70	6	88	7	63	8	74	7
Synchronization matrix	66	8	85	9	80	1	82	5
Design	34	11	66	10	30	12	44	14
Center of gravity analysis tools	23	15	63	11	15	15	48	12

Table 4

IO Officer Survey Results for Frequency, Criticality, and QC Preparedness to Work with POR Tools, Products, and Processes (continued)

| | | | | | QC preparedness | | | |
| | Frequency | | Criticality | | 2011 | | 2012 | |
Tools, products, and processes (POR)	% Fav	Rank	% Fav	Rank	% Fav	Rank	% Fav	Rank
Army publications, Field Manuals, ATP, ATTP, ADP, ADRP, etc.	43	10	63	11	65	5	74	7
Effect target activity purpose (ETAP)	32	12	61	13	70	2	78	6
Systems analysis	26	13	54	14	20	14	30	16
Network analysis tools	18	17	51	15	15	15	30	16
Knowledge networks for IRCs (forums, etc.)	19	16	49	16	25	13	48	12
Command Post of the Future (CPOF)	26	13	43	17	5	18	22	19
Joint Command and Control System (JC2) (Joint System)	12	18	32	18	10	17	39	15
Distributed Common Ground Systems-Army (DCGS-A)	7	19	29	19	5	18	27	18

Note. POR = Program of Record; % Fav = Percent Favorable; ATP = Army Techniques Publication; ATTP = Army Tactics, Techniques, and Procedures; ADP = Army Doctrine Publication; ADRP = Army Doctrine Reference Publication.

The most frequently used tools, products, and processes were mission analysis for MDMP, open source media, COA development and COA analysis for MDMP, and targeting. When asked how critical it is to understand the following tools, products, and processes, the most critical were targeting, mission analysis for MDMP, COA development for MDMP, assessment, and COA analysis for MDMP.

There were several processes that reflected points of convergence within the survey data. MDMP, COA development for MDMP, and COA analysis for MDMP were rated critical by more than 90% of IO officers and are used frequently (see Table 4). This is not surprising, considering that each is a part of MDMP, and MDMP is a task that was rated as the most critical and second most frequently performed task in the Training and Education section (see Table 1).

Previously in the Training and Education section, participating in targeting meetings was rated as critical and frequently done, yet recent graduates were not as prepared to participate in targeting meetings (see Table 1). When asked about targeting in the Materiel section, targeting was again rated as critical and frequently performed, and again many recent QC graduates did not feel prepared to conduct targeting (see Table 4). This is another point of convergence with the survey data from the Training and Education section, providing another data point in support that IO officers could be more prepared to conduct targeting.

Assessment was also rated again in the Materiel section (see Table 4). When asked in this section, 92% of IO officers rated assessment as critical and 59% of IO officers responded that they do assessment frequently (which is more frequently than when it was rated in the Training and Education section). However, many recent QC graduates still rated that they were not prepared to conduct assessment, providing further evidence that assessment is important and could be better educated.

There were also some other points of divergence. Open source media or what some might consider "media monitoring" was considered a frequently used tool and was rated critical by many IO officers, yet recent QC graduates did not feel prepared to use it (see Table 4). Therefore, the IPO may want to stress the importance of using open source media in the QC and through other communication with the functional area.

Additionally, many recent QC graduates reported feeling prepared to use the Effect Target Activity Purpose framework (ETAP), yet most IO officers do not consider it critical or use it frequently (see Table 4). Therefore, the QC may be able to spend less time on ETAP. One explanation for this finding could be because ETAP is the first step in a process that IO officers may understand theoretically, but they do not fully understand how to use ETAP in action.

Non-POR tools, products, and processes. IO officers were also asked about non-POR tools, products, and processes. The results are displayed in Table 5.

Table 5

IO officer Survey Results for Frequency, Criticality, and QC Preparedness to Work with Non-POR Tools, Products, and Processes

Tools, products, and processes (non-POR)	Frequency % Fav	Rank	Criticality % Fav	Rank	QC preparedness 2011 % Fav	Rank	2012 % Fav	Rank
Microsoft Office Suite	89	1	90	1	53	1	43	2
Commander's Communication Strategy	56	3	84	2	20	4	46	1
Sharepoint	81	2	82	3	47	2	30	7
Strategic Narrative	53	4	82	3	20	4	41	3
Combined Information Data Network Exchange (CIDNE)	38	5	49	5	5	9	14	9
Radio in a box (RIAB)	38	6	49	5	25	3	41	3
Tactical transmitter	15	8	40	7	15	7	32	6
Tactical Ground Reporting Network (TiGRNet)	18	7	38	8	17	6	41	3
Narrative wheel	8	9	32	9	15	7	29	8

Note. POR = Program of Record; % Fav = Percent Favorable.

Of the non-POR tools, products, and processes, IO officers most frequently used Microsoft Office Suite, SharePoint, the commander's communication strategy, and strategic narrative and rated these tools and products as the most critical. IO officers did not report being especially prepared by the QC to use any of the non-POR tools, products, and processes, which is not surprising because the QC does not focus on non-POR tools, products, and processes. Microsoft Office Suite, strategic narrative, the commander's communication strategy, and SharePoint were rated the highest on QC preparedness.

Microsoft Office Suite, the commander's communication strategy, SharePoint, and strategic narrative were the only non-POR tools rated by more than 50% of IO officers as critical (see Table 5), and Microsoft Office Suite and SharePoint were used the most frequently. It is possible that some other tool, product, or process may be more useful or effective, but IO officers rely on Microsoft Office Suite and SharePoint primarily.

There were some other insights that emerged from the interviews and open-ended survey questions on the topic of Materiel. In the interviews, Materiel was met with less enthusiasm than

most of the other topics. One issue that was raised was that many IO officers were not aware of all the tools available or did not have access to them until they deployed, and some not until well into the tour. This is problematic because if IO officers are not aware of all the tools they could or should be using, they may be less effective. Therefore, it may be helpful to find a way to organize the available tools, products, and processes so they are easy to find and IO officers can become familiar with what is available. Developing an online community of practice may be one resource that would help with this issue.

Another suggestion was that IO officers, "need to have some type of equipment package that allows us to share information joint/interservice, and we need planning tools that help us integrate with the rest of the staff and equipment" (IO officer). He went on to explain that there is one Command Post of the Future (CPOF) at the division level, but to be effective, the IO officer must work with other sections and IRCs to have enough manning and CPOFs to cover plans, future operations, targeting, and current operations. (This was used as another justification for why the IO cell is so important.)

It could be that CPOF may be one solution to the issue of visualization, but when IO officers were asked about CPOF, they reported it is not frequently used at this time and is only considered critical by 43% of IO officers. This may be an area for further investigation because it would be easier to use a tool that already exists, rather than reinvent the wheel.

When asked "What would help you better visualize the information environment? How would you like [IO] information, such as data about the information environment, to be displayed to enhance visualization and understanding?" one commander stated,

> I'm a very visual person, so I can take volumes out of a single picture if you will. If there was a way to reflect a threat group's theme and message and how it is spread across an area, that would be very helpful, that's one. And then the second part would be our theme and message, how it spreads across an area, and how it is received. I've got them working towards it, but I'm not completely satisfied with where it's at yet.

Another commander commented:

> Personally, I believe in the big white board theory. I see it best when we sketch it out, and we develop it from there, off the whiteboard. So I got clouds; and I got lines being drawn; and I got different groupings; I got messages; key people we're trying to influence; key groups were trying to influence. . . . It's the scoping of the problem set. I use the whiteboard to try and figure out what we're dealing with; that's how it often starts out anyway.

This concludes the information collected that was specifically related to Materiel.

Leadership

The needs analysis covered mentorship, as well as some leadership topics in general.

Mentorship. In the survey, IO officers were asked to rate their experience with mentorship. Only 18% of IO officers ranked mentorship as "excellent" or "very good," which is very low (see Figure 21).
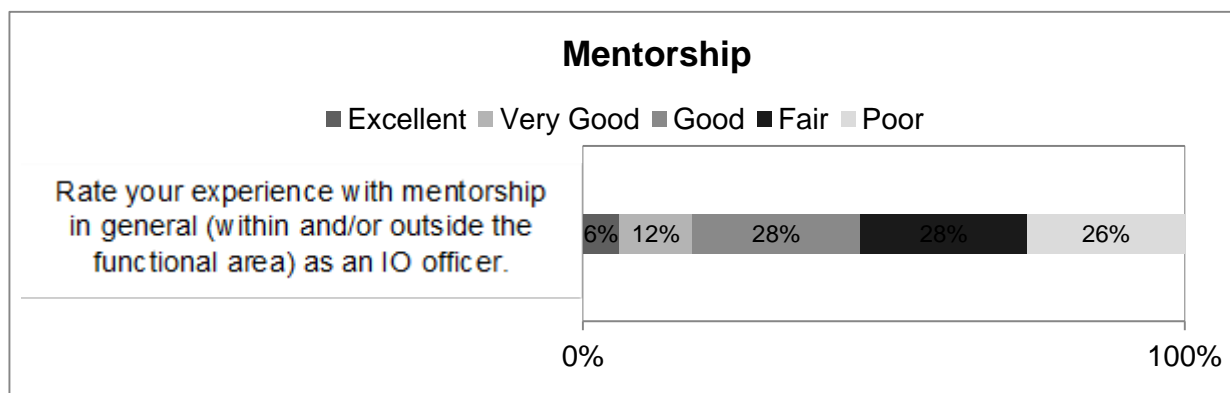

Figure 21. IO officer survey responses to mentorship.

Interviewees were also asked about mentorship. One IO officer summed it up as follows, "It is extremely important, it is done extremely poorly, but this is not an IO officer problem, this is an Army problem." Another IO officer discussed mentorship in more detail:

> [Mentorship] can be improved by more people giving their time and willing to be mentors and reaching out. It could be improved on both ends: More people should reach out and be mentors, and more junior officers should seek out mentors, so it's a two-way street. . . . . I think mentorship is valuable because you can broaden somebody . . . by sharing your experiences . . . you can walk them through your thought processes and how you arrived at something and why you see problems in a different way.

Several issues related to mentorship were raised with the interviewees and survey open-ended questions. One issue was formal versus informal mentorship. One IO officer expressed interest in a formal mentoring program for new IO officers completing the QC. This may be especially useful to IO officers who are sent straight to brigade because some interviewees reported that mentorship across echelons is lacking: "When I was a brigade [S]7, it seemed like everything was going up; all the information sharing was going to them, and I wasn't getting anything down," stated one IO officer. Another IO officer elaborated,

> The [G]7 ideally should not only mentor his own on division staff, but he should be mentoring the brigade S7s. He should be reaching out to them quite often, and he should also be supporting them, as well. He should have knowledge of their operations and he should be supporting them, providing that overhead division G7 coverage. He should also ensure that they are being utilized for the task and purpose of their creation of being an S7 because he's the mouthpiece for that S7. All his IO officers in brigades, he should be providing that backbone for them. They're supposed to be doing it, but I would re-emphasize that [to the G7s].

While some expressed interest in formal mentoring, others said they preferred informal mentoring so the mentee can select a mentor that is a good fit. One IO officer said, "You find

people that you think are inspiring and you latch on to them. My mentors honestly are the [IRCs]; the people with the knowledge, that's who I reach out to and talk to all the time."

Interviewees also talked about peer mentoring. One interviewee noted that classmates tend to look to each other for answers after the QC. Another interviewee stated that brigade S7s tend to share ideas and successes, as well, which may be due in part to make up for a lack of mentorship at the brigade level.

Other leadership topics. Leadership in general was also discussed in the interviews. Several IO officers did not feel ready to lead in their jobs as S7s after completing the QC. One IO officer commented,

> QC did attempt to instill [leading without formal authority] – everybody had a chance in the QC to lead the group, to be up front. It's one thing to be a leader in that small group environment because after the first couple weeks, you're comfortable with the group, it's easy to lead that group. It's difficult when you don't know the audience that you're dealing with and now you have to lead the group. That's challenging.

Therefore, it may be helpful to pull in more senior officers to help IO officers practice in a higher stakes environment with an unfamiliar audience. A similar comment was made by another IO officer when talking about the importance of IO officers being able to brief senior officers. He suggested that the QC bring in senior officers so IO officers can gain the confidence needed to fulfill that role. The IO officer also stressed that briefing commanders may be more difficult for less experienced, newer officers that become IO officers. Several interviewees thought including more leader development in the QC would be useful, especially given that IO officers show up to brigade as the most junior officer and they have no direct tasking authority, making it crucial for them to be able to lead without authority. Another IO officer said, "Coming out of the IO officer QC I would not have been [ready to lead informally], but I had a lot of time in division and learned from some very good people." This point touches on the issue of the IO officer career path that will be discussed in more detail in the Personnel section. Also, this again highlights the important role mentorship can have in preparing IO officers to be effective.

Other IO officers said they did feel prepared to lead informally after the QC, but they attributed their preparedness to personality, being a "natural leader," or being an experienced staff officer, (personality will be discussed in more depth in the Personnel section). Experience may help with IO officer leadership in a couple of ways. Familiarity with how to work as a staff officer is beneficial because it gives confidence. In addition, this familiarity can help gain legitimate authority. As one IO officer explained,

> If you're doing the right things, people will come to you because they will see that you are value-added to the process, you will have access to information they need, and your authority will be valid, legitimate authority based on knowledge and skill and experience, instead of just rank and legal authority. . . . [IO officers] are going to be working with guys that are post-command at various levels, that are senior, and that are driven for success in a very competitive field.

In sum, IO officers need strong leadership skills because they are expected to lead informally, especially at the brigade level. IO officers do not have grade or formal authority over those they must work with to integrate IO efforts, so they need experience, competence, and expertise to establish credibility and gain trust in their leadership. When IO officers are confident and competent, they are better at leading and integrating the IRCs, as is required for the job. Thus, it is recommended that the QC bring in more senior officers to enhance IO officers' confidence in working with unfamiliar officers of a higher grade.

Another consideration is leader identity; it could be that IO officers' leader identity may not be well established. Therefore, incorporating more leader development into the QC and facilitating leader development through the IPO after IO officers graduate from the QC may increase IO officers' job performance. If the IPO and QC can establish and reinforce IO officers' identities as leaders and integrators, they may have more success, especially in the brigade S7 position.

This concludes the information collected that was specifically related to Leadership.

Personnel

The survey covered several issues related to Personnel including manning, professional development, the transition from tactical to joint assignments, the IO officer career path, and talent management.

Manning. Regarding issues related to manning, IO officers were asked if they thought manning at the brigade and division level was appropriate (see Figure 22).

Manning

■ Agree ■ Neither ■ Disagree

The manning for IO/IIA at BDE level is appropriate.	27%	23%	50%
The manning for IO/IIA at DIV level is appropriate.	40%	29%	31%

0%   100%

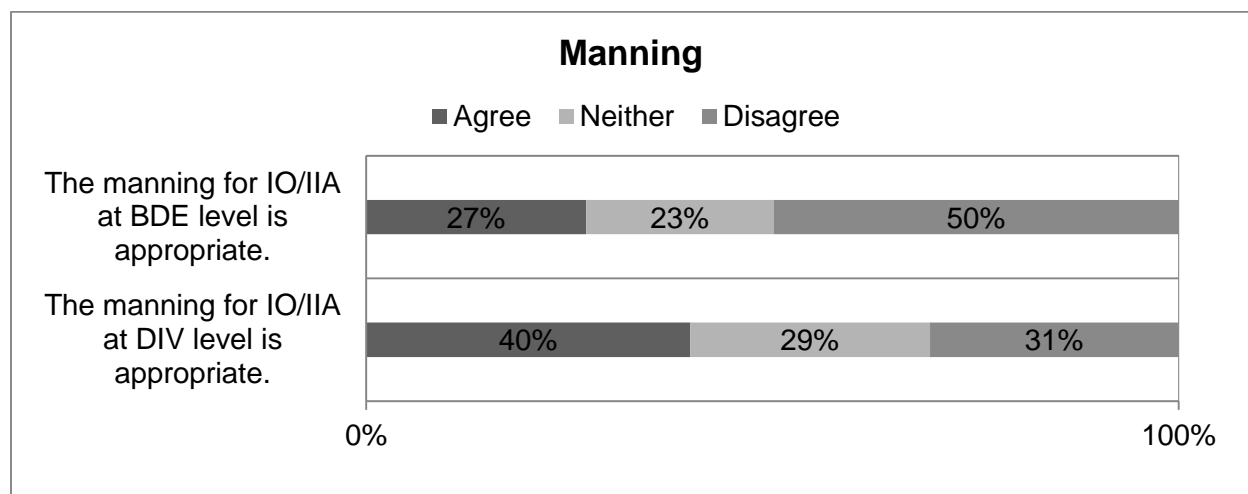*Figure 22.* IO officer survey responses to manning at the brigade and division levels.

Only 27% of IO officers agreed that brigade-level manning is appropriate and half of IO officers disagreed with the statement. Responses were slightly more favorable when asked about the manning at division level, with 40% agreeing with the statement, and 31% disagreeing, but overall, satisfaction with manning is low.

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Interviewees also commented on manning issues, expressing that the IO cell helps mitigate manning issues. At the division level, one IO officer explained that they are undermanned:

> I have got to be able to move from plans, [future operations], and targeting into current [operations]. I don't have enough people just within the G7 section to man across all those planning horizons. … So by cooperating with our IRCs now we've got depth of personnel and equipment we need.

At the brigade level, one IO officer explained,

> Even though at tactical level a lot of things are local, but you need more personnel to be able to do plans, to be able to do full 24-hour operations . . . . Sometimes local requires a lot of planning for Information Operations . . . and requires personnel. So without the augmentation from outside elements, reserve components for deployments, or augmentation from field support teams (FSTs) from 1st IO Command . . . you can barely function. Sometimes you don't get those assets down to the brigade level.

This comment again reinforces the benefits of organizing the IO cell. Personnel that IO officers said they would like included in the IO cell were a deputy, intel analyst, targeting warrant officer (WO), PSYOP planner, electronic warfare (EW) personnel, PAO, human terrain team (HTT), and CAO. Specifically, one IO officer said that if he hadn't been there a year prior to deployment and been able to convince the command that he needed a deputy, "I would not have been as effective. So I think at the brigade level, there needs to be more assets cut to the brigade S7."

There were multiple comments about the need for intel support. One IO officer justified the need for intel support as follows,

> I need dedicated intel support . . . [because they] actually have the time to data mine and pull all the information out, that could actually support a reliable network diagram. I could do them, but within the shop I don't have time to do the full data mining and to really dedicate to maintaining it which makes that network diagram kind of dangerous because while it'll be better than what I have right now, if it's not complete, it's going to force me to [draw] false conclusions and make poor or 50% recommendations to my boss. . . . If it's not a really good network analysis tool . . . it could really lead to some really negative second and third order effects.

Another personnel issue that was described involved complications with ARFORGEN. One IO officer explained that when the IO officer and enablers arrive to the unit plays a part in their effectiveness:

> I got there a year before the deployment and I was able to work on the staff, work with the staff, and get the confidence of the commander and the S3 and the XO. They knew I was a competent officer who was a team player and worked hard with the staff. So, when we deployed, I already had that reputation so I think I was very effective because of that. More challenging for other IO officers when

they arrive at a unit as they're deploying, and the unit has to figure out during operations… what [the IO officer's] capabilities are and whether he's competent.

Another benefit of arriving early is that the IO officer can prepare for the IRCs joining the unit and be prepared for how they will be integrated as they arrive to the unit. In addition, one IO officer stressed the importance of the hand off between IO officers when one leaves, and the new one joins.

> The guy that replaced me showed up three months after I left. So, how good of a hand off was that? I handed it off to his temporary replacement, so how much was lost in translation? Because the guy that was temporarily filling in for him wasn't an IO officer trained guy.

This has implications for assessment, because, as noted above, assessment is a long-term process and needs to continue across IO officers, rather than having the assessment process restart with each deployment.

Another personnel issue is by name requests. The main issue described here by interviewees was that when brigade commanders by name request someone right out of the schoolhouse it "really undermines our ability to manage the force at the division level and ensure the professional development for everybody." This IO officer went on to explain,

> It affects our ability to really try to manage the guys who may need some professional development or are ready to move into the next job but I can't because someone else has been pulled in or moved based on personality rather than capabilities.

By name requests also exacerbate the issue with sending IO officers to brigade for their first assignment, which will be described in detail below.

Professional development. Another topic to consider under Personnel is professional development. Two survey items addressed this topic. Close to half of IO officers are satisfied with IO officer professional development (see Figure 23). Similarly, close to half of IO officers consider IO officers to be well informed about what is going on in the functional area.
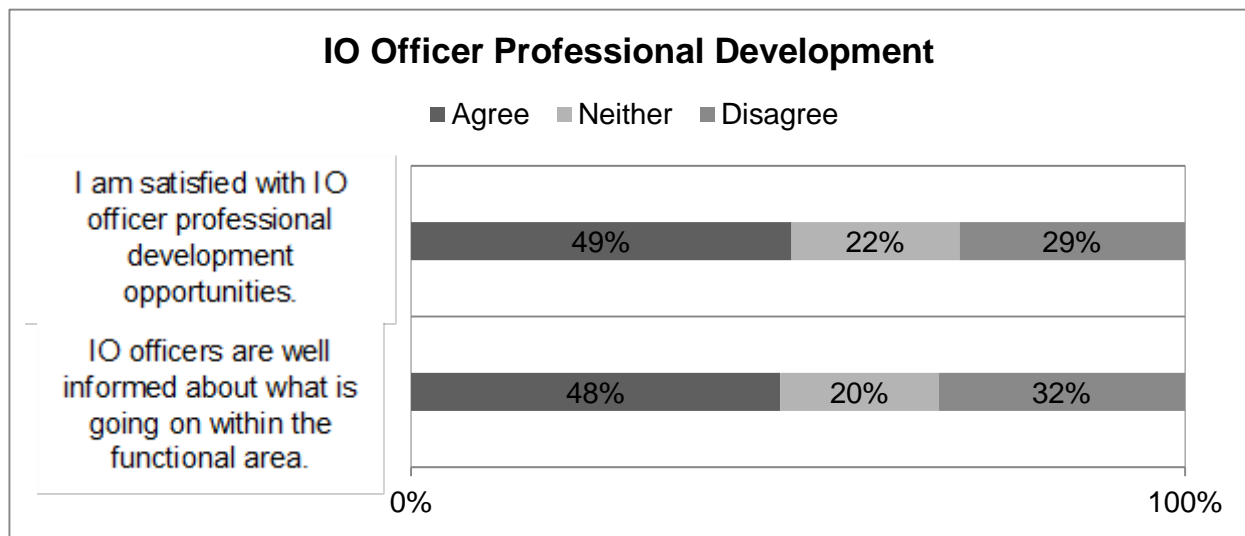
IO Officer Professional Development

■ Agree ■ Neither ■ Disagree

I am satisfied with IO officer professional development opportunities.

| 49% | 22% | 29% |

IO officers are well informed about what is going on within the functional area.

| 48% | 20% | 32% |

0%   100%

Figure 23. IO officer survey responses to professional development questions.

These results suggest there is room for improvement on professional development.

Several professional development topics were discussed in the interviews. Several commanders and numerous IO officers talked about the importance of broadening experiences. One commander explained the importance of broadening in detail:

I think it's important for the [IO officers] to have a broad background and broadening experiences like grad school and working in civilian organizations and working interagency and intergovernmental. And the ones who aren't as effective seem to be lacking that broad background and broadening experience. . . . Why were some of them really good and some of them weren't? I think that was a key thing. Some folks come in with too narrow a view.

Broadening experiences are important because they help develop a systems perspective which is important for integrators. IO officers are excited about broadening experiences like training with industry and civilian education opportunities within the functional area. However, it may be beneficial for the IPO to provide more information on how and when to pursue these opportunities. If the IPO is already providing this information to IO officers, these data may be an indication that IO officers may benefit if the IPO tried different ways of reaching out to IO officers. For example, if information about broadening experiences is included on the website, and currently IO officers are asking for more information, perhaps a quarterly professional development email could also be sent out to reach more IO officers.

Self study was mentioned by many IO officers as crucial to success. There were a number of resources IO officers mentioned they use for professional development, including: marketing, psychology, sales, personal growth, self-help books and publications; open source media; civilian marketing firm websites; and the IRC's doctrine, websites, and discussion forums. As one IO officer explained,

An IO officer needs to understand, hey, you are in the behavioral science/marketing field. It is your responsibility to get online and learn your craft. I only hold the school responsible to a point; it is also that officer's responsibility to develop his/her own self, too. . . . There's a lot of resources out there for us.

Another suggestion was that the IPO could provide more information about self study and/or reinforce the importance of self study when IO officers are in the QC.

In regards to how well informed the IO officers are about what is going on in the functional area, there were several areas IO officers mentioned they appreciated. One IO officer praised the IPO for keeping IO officers informed on doctrinal updates, while another appreciated when the IPO published some advanced schooling and civil assignment opportunities. However, it was also suggested the IPO describe when is the right time to take such opportunities. Another IO officer complimented the IO officer population email blast as a way to get valuable information. IO officers find value in networking and staying in touch with classmates as a way to stay connected and informed, as well.

In addition, IO officers commented on several issues pertaining to communication within the functional area that could be improved. One IO officer said he tried to keep up with the IPO's blog, but lost touch and is unsure how successful the effort has been. He also commented that the website could contain more information and would then be more useful. IO officers talked about wanting a centralized place to access information, so the IPO could create a "knowledge dump" including references, products, and other relevant information or a community of practice so IO officers can share lessons learned more easily. One IO officer said something like this exists, but he thought it was inaccessible to IO officers after they graduate from the QC.

IO officers would also like to be able to access the IRC's knowledge websites so they can study the IRCs in more depth. One IO officer explained that the IRCs have toolkits, doctrine, lessons learned, and the instructors and students put examples of products on their knowledge websites, which are very helpful. In addition, the IPO could send out an annual reading list including books and other publications to help IO officers continue their professional development. One IO officer said he would like more information on the psychology and human nature behind IO, and the reading list could include resources in this area, as well. IO officers would also like to see a list of recommended courses to take after the QC, which could be updated annually.

IO officers also expressed that they think IO officers would benefit from an annual or semi-annual update to IO officers. The update could include lessons learned, new doctrine, and what is working and what is not working in the field. Another suggestion was for the IPO to have monthly meetings with the division G7s, or visit each division once a year so they can meet with the staffs and IRCs and keep them updated on current issues. Many IO officers think if the IPO gets out to division they can help sell the mission of the functional area and ensure efforts are coordinated. The more the IPO can connect with IO officers in the field, the more in touch they will be with deployed IO officers and current issues.

Finally, several IO officers had comments about Intermediate Level Education (ILE). They think ILE Distance Learning (DL) should be opened sooner for IO officers, and there is concern that IO officers will fall behind if this is not achieved. One IO officer explained, "I've got young captains that are waiting to find out if they're going to be promotable before I can get them moved up through and continue on with their professional development." If senior captains can get access to ILE DL, then they will be more qualified to serve as the S7 than if they have not had ILE. Some are concerned that IO officers are being forced to do the short ILE or ILE DL because the long resident course is the most valuable and preferred. Another concern that was mentioned was that commanders are not going to want IO officers doing ILE DL under their command.

Tactical to joint transition. Another topic covered in the survey was transitioning from the tactical to the joint level. Survey results showed that 63% of IO officers agreed they understand how to transition from tactical to joint, as shown in Figure 24.
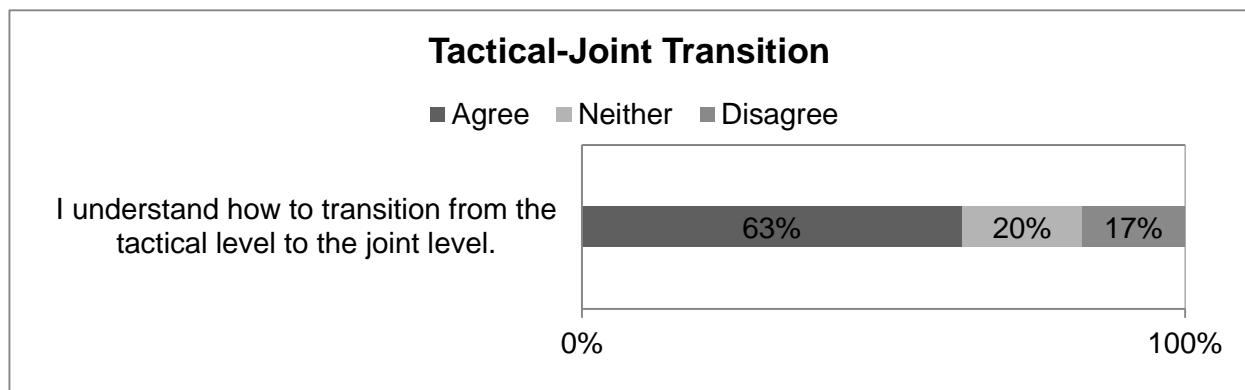

Figure 24. IO officer survey responses to understanding the transition from the tactical to the joint level.

IO officers expressed some concerns about how they should prepare for joint assignments. Others mentioned that IO changes at each echelon and that many IO officers do not understand the transition, so this is an area that could be improved. Again, if the IPO is already providing this information to IO officers, perhaps utilizing multiple communication venues (on the website, through email blasts, etc.) would help reach a wider audience.

Career path. Another area that was explored was the IO officer career path. Less than half of IO officers are satisfied with the IO officer career path (see Figure 25).
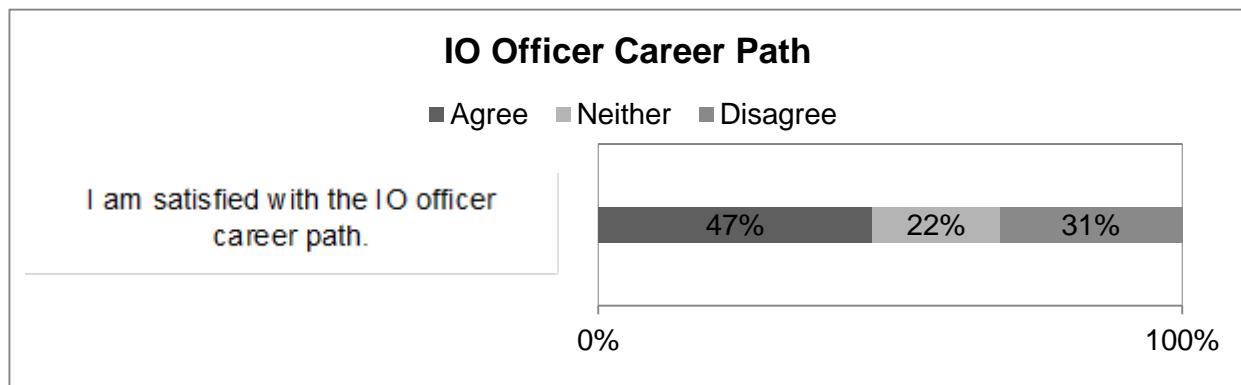
IO Officer Career Path

■Agree ■Neither ■Disagree

I am satisfied with the IO officer career path.

| 47% | 22% | 31% |

0%   100%

Figure 25. IO officer survey responses to their satisfaction with the IO officer career path.

The interviewees discussed some underlying issues that may have contributed to the survey responses. First of all, it is important to note that there was some confusion over the career progression, with IO officers desiring a better understanding of a typical or ideal career path. Therefore, IO officers may benefit from more information on the career path provided by the IPO and QC. As mentioned previously, providing the information in numerous venues may help reach more IO officers and get everyone on the same page.

By far, the main issue related to the IO officer career path found during data collection was sending a new IO officer to be the brigade S7 as his/her first assignment. Highlighting the confusion over the career path, one IO officer said that when he finished the QC, he thought IO officers had to go straight to a brigade S7 position before doing any other job because the S7 is a key developmental position. He explained:

> I found out later that other people working at division and Corps are getting key development time because they're considered working in the G7 shop. They are getting developed by their mentors, they are getting developed by others that are in their section, being allowed to go to school, not having to fight the naysayers . . . and it's disheartening to me because I have to go through this position of pain. I'm sure I'll come out stronger in the end, but I really would have preferred to have gone to a division staff where they could train me a little bit further and then been put into an S7 position versus going right from the course to being the only person that's IO trained. I have nobody to go to. . . . It took me about 6 months to understand what I needed to do and affect my environment and figure out what I needed to do and how I needed to get there. It was a painful six months.

Another IO officer expressed, "I am very uncomfortable with the challenges we have between HRC in manning directly down to the brigades." One reason why IO officers should not go straight to the brigade S7 job is that, "When you're in the brigade level, you are The Man (or The Woman); you're the only SME on that staff." Another IO officer agreed,

> Especially when you're putting them into a job that's the first time they've ever been an IO guy, too. So, you're really setting them up for failure. A guy who has the potential to be a very strong IO guy, he just doesn't have the education or knowledge yet to do the job. You're throwing him into one of the toughest jobs he's going to have as an IO guy

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for his very first job and he's going to sink or swim. And unfortunately a lot of those guys sink.

Few IO officers are able to be successful going straight to the brigade S7 job after the QC because a 12-week course cannot adequately prepare an IO officer to do the complicated job. The S7 has little support because he/she is the only IO person on the staff.

Sending an IO officer to brigade as their first job also has complications for talent management and educating the force. As one IO officer explained:

There needs to be some real thought of who we're putting into these jobs because . . . I think you ruin guys who have the potential to be strong IO guys that just don't get a chance to do it and they get burnt out too quick because they just get beaten and abused. It is a tough job. . . . By putting weak guys or guys who aren't quite prepared to go into the job, it goes back to the earlier discussion of how do [IO officers] educate the force on what we do.

This IO officer makes two important points. One, it is difficult to serve as a brigade S7 as an IO officer's first job, and therefore, that IO officer may be more likely to burn out and leave the functional area or the Army. The second point ties into educating the force, which was discussed in the Doctrine section. If a new and inexperienced IO officer is sent straight to brigade, this may affect how the commander and staff perceive the functional area as a whole. An IO officer elaborated on this point:

As a brigade commander, now you've got a guy who is in the running to be a . . . General Officer. . . you're putting weak IO guys in front of them so they're learning that IO can't deliver or they don't understand what IO does. . . . There's no other way to educate the leadership in the Army other than to get solid IO guys out there in front of them and actually do our job and to show them hey, this is what I can do.

If more experienced and seasoned IO officers are sent to brigade, they may be more likely to succeed and represent the functional area well. "It's as much about putting the right guy in the right job so he sells our career field as it putting the guy in the right job for professional development for himself" (IO officer).

Therefore, IO officers should get experience in another job before serving as a brigade S7 so they are prepared to be effective on the brigade staff, regardless of the IO officer's grade. However, the functional area has sent some captains to the brigade S7 job, which introduces another complication. One IO officer stated, "You need to be an O4. You will get pushed around on a brigade staff if you're an O3." Further, one IO officer gave another reason having experience as an IO officer before serving at brigade is important:

IO officers at every echelon they're showing up as the junior primary staff member. . . . One of the smallest staff sections in the organization, most junior guy, and they are left quite often truly practicing their craft in terms of how do you influence other staff sections that you depend upon for everything you have to do and everything you have to

integrate and everything you have to work on for the commander. How do you influence those guys without any authority over them, without any physical tools.

There were numerous suggestions of how to resolve the issues surrounding the brigade S7 job. The most common suggestion was to send new IO officers to work on a staff or as a planner before sending them to brigade. This allows them to gain the necessary experience, benefit from mentorship, and become familiar with the IRCs before being in charge of integrating the IRCs at the brigade level. As one IO officer explained,

I don't want to send an IO officer to a brigade until he's sat at least six months on a division staff so he has an idea of the things and the problems that the division has to deal with on a daily basis and what kind of things can the division staff reach out and get for him. . . . Otherwise you don't know what you don't know.

One IO officer suggested that a major improvement would be to have two IO officers at brigade level, one as an Engagements Manager, working under the S7. New IO officers could be sent to brigade as an Engagements Manager, then go to division staff, and then they would have the necessary experience to serve as a brigade S7 (talent management will be discussed in more depth below). By name requests complicate the career path, as well, because they undermine the ability to put the right people in the right assignments.

It is important to note that several interviewees expressed that the brigade S7 is a job that every IO officer should do, but not as their first assignment. Thus, it may be beneficial for the IPO to treat brigade S7 as a capstone job, rather than an entry-level job.

Talent management. Several talent management topics were examined. In the survey, IO officers were asked about the quality of IO officers and attracting quality officers to the functional area. Survey results showed that about half of IO officers (49%) are satisfied with the quality of IO officers, and less than half (45%) think the functional area is attracting quality officers (see Figure 26).

IO Officer Talent Management

■ Agree ■ Neither ■ Disagree

	Agree	Neither	Disagree
I am satisfied with the quality of IO officers.	49%	27%	24%
The functional area is attracting quality officers.	45%	32%	23%

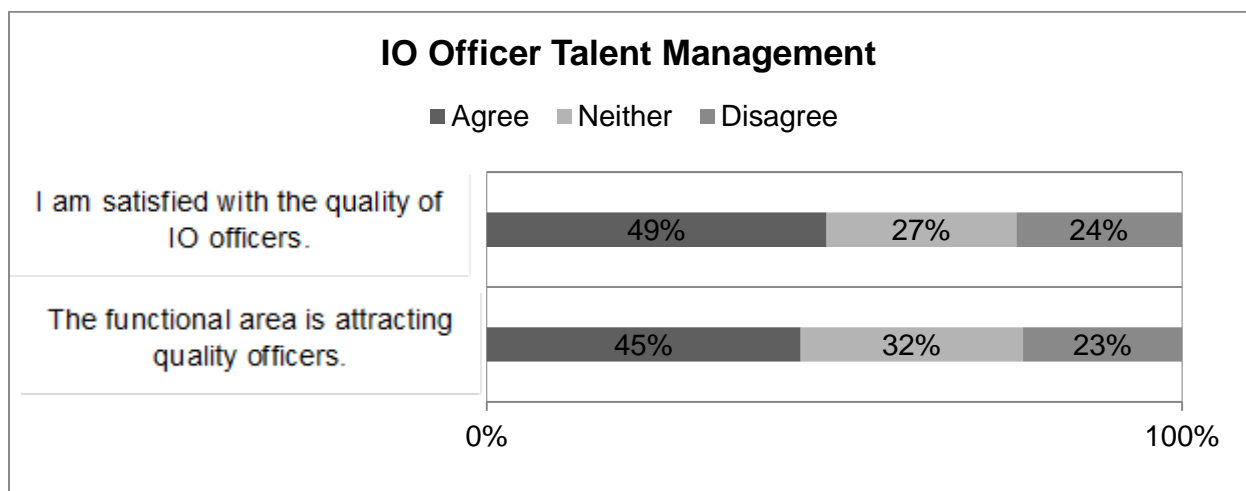0%   100%

Figure 26. IO officer survey responses to talent management issues including the quality of IO officers and attraction to the functional area.

In the interviews, several IO officers and commanders described the quality of IO officers as being a "mixed bag." One commander stated, "I've got a phenomenal IO. . . . I had a couple that worked with me in my previous assignment that were equally strong, but in that role I saw a mix, I saw probably 50/50." One experienced IO officer commented, "About half of them are simply incapable of doing the job . . . they lack the mind for it; they lack the skills for it." Another IO officer commented that there is a wide range of quality from IO officers, which affects a brigade commander's expectations of his/her new S7. When a new IO officer is sent to brigade, the brigade commander may have had issues with his previous IO officer, and therefore the new IO officer has to prove him/herself when they arrive on the job. On the other hand, the brigade commander may have had an excellent IO officer and expect that from his new IO officer. The perception of the quality of IO officers spanning a wide range could be due in part to inexperienced IO officers being sent to brigade unprepared for the job.

As shown above in Figure 26, less than half of IO officers think the functional area is attracting quality officers, which is an issue that was also discussed in the interviews. One IO officer described how the functional area took everyone when it started, which gave it a bad reputation. However, he noted that,

> Now, ten years later, I'm really amazed the number of junior officers that are coming up to me asking me about becoming an IO person. . . . These are guys who are actually very solid officers that have a lot of potential . . . I think we're doing a good job of selling ourselves, now I don't know that is a concerted effort.

Another IO officer talked about the incentives to attract officers to the functional area:

> That's one thing I would have to hope for right now is if our numbers are so good, and that we're offering so many great things to people and so many opportunities. . . . we can be very brutally selective.

Some IO officers are concerned that they are not eligible for command, which may make it more difficult to attract officers to the functional area. One commander said, "I have talked to a number that have struggled where they like what they're doing, but they just don't see the career progression at higher grades. That's going to become a disincentive for quality folks to want to become IO officers." The IPO informs potential IO officers that there are no opportunities for command in the functional area, yet the concern was still raised by multiple IO officers and one commander. Because IO officers are not provided the same opportunities as other careers and branches to command, they are put at a disadvantage for promotion which may deter some officers from becoming IO officers. Attraction to the functional area is a topic the IPO may want to explore further to find ways to increase opportunities and incentives to augment the number of officers interested in the functional area.

On a similar note, another IO officer stated, "The prestige level needs to be raised a bit before you're going to attract more of the folks that need to be doing the job. . . . when you raise the selection criteria, you attract better people." This introduces the topic of selection, which was also highly commented on in the interviews. Many interviewees

expressed that they would like to see the functional area be more selective of whom they bring into the functional area. Some still feel that the functional area is accepting too many officers just to fill slots. As one IO officer commented, "I would much rather see a 50% fill rate filled with highly qualified people, than a 100% fill rate and half of them are being looked upon as completely worthless."

Two main reasons why selection is important were mentioned. One reason to be more selective is to increase the legitimacy of the functional area. As one IO officer explained, "If we're going to increase the legitimacy of the branch, then we have to really focus in on the caliber of the people we're bringing in and our willingness to kick some people out." If there are under qualified IO officers in the field, it discredits the branch and affects the perceived value of IO, which is related to the issue of educating the force on IO (as described in the Organization section). Thus, the IPO could use selection measures as a tool for ensuring IO officers that are brought in can perform at a high level. One IO officer stated, "[IO officers] should have about the same qualifications as a Military Intelligence professional; you need that caliber of person in order to do it well."

The other main reason selection is important is that some people are more suited to be an IO officer – it may not be possible to train anyone to be a quality IO officer. As one commander stated,

> I've been around some very good [IO officers], I've been around some that aren't so good. And of the ones that aren't so good it was who they were, not the lack of training they received. . . . Who you track and who you assess and who you put back out as a 30 is as important [as the training].

Further, an IO officer explained that, "part of it comes back to their background. . . . I think there are certain branches or career fields that prepare [future IO officers] better."

Several interviewees thought selection was important because, as one IO officer put it, "There's no way you can teach them everything at the course – you'd end up with a year-long course and they'd still come out [without] any hands-on experience." Others agreed that it may be difficult to train some people to be an IO officer in an academic setting, based on the individual's background and personality, making selection very important.

Interviewees suggested many factors to consider that may potentially result in selecting more qualified IO officers. Operational experience was mentioned as something to consider in selecting IO officers. Several IO officers expressed that having a background in operations helped them because they were already familiar with staff processes, staff roles, and MDMP (as mentioned above). Considering the amount of time IO officers spend integrating with other staff functions, operational experience helps IO officers quickly become effective, at least at the brigade level. Others talked about the importance of having done company command before becoming an IO officer, an issue that will be described below when discussing issues with young captains becoming IO officers. Having done company command helps IO officers understand how to work with operational members of the staff.

Several interviewees talked about the branch where IO officers are coming from as being important to selection. Again, these comments mainly centered on the idea that IO officers with operational experience will be more prepared than IO officers coming from a support branch. For example, interviewees mentioned armor, artillery, and infantry as backgrounds that would be more beneficial than signal or Adjutant General (AG). In addition, having prior experience as enlisted also helps prepare IO officers for their jobs. Another IO officer suggested the IPO more deliberately figure out what career fields or branches that would be ideal for the IO officer job, so they could recruit from those areas. Military police and military intelligence were mentioned as areas that might be good to recruit from because they have beneficial skills that many IO officers do not possess. Officers with a background in MISO or PA are also considered strong candidates.

The issue with needing experience is even more important when considering young IO officers (captains and junior majors). Many interviewees discussed reservations about bringing inexperienced captains and junior majors into the functional area for a number of reasons. First of all, the issues that were described above, making a case for sending new IO officers somewhere besides brigade as their first assignment, are even more of an issue with less experienced IO officers. There is more variability in effectiveness when sending captains and junior majors to brigade because they are less experienced tactically, and therefore may struggle more at brigade when given the task of representing the functional area. As one IO officer explained:

> If we're taking younger people and transitioning them over into the IO officer field, they may not be getting exposed to . . . the skill sets they need to be successful staff officers especially working at a brigade and above. Technically we're taking people right now that have only experienced platoon and company level activities or maybe battalion at the most and only in a limited basis, and we're moving them directly into division and brigade level staffs. Some guys do really well and some guys struggle. . . . We're asking a lot of young people to make this leap.

In addition, one IO officer stated that IO officers need a general understanding of how warfare works, which is not something that can or should be taught in the QC. As another IO officer explained,

> A captain with four years in the Army . . . what's he seeing in his mind? He's not familiar with the culture, he's not familiar with the [IRCs], he's not familiar with how a maneuver commander thinks, he doesn't even know the terminology. How many times has a captain with four years in the Army done MDMP?

One IO officer mentioned that captains that were enlisted before may have gained experience that will make them more successful as an IO officer. The other background experiences described above benefit younger officers, as well.

One positive comment from an IO officer about young captains is that the IPO then has the opportunity to "grow their own." If they are less experienced, there are fewer bad habits to break. Providing a young captain with good mentorship and an appropriate career path may

result in a very effective IO officer. However, without the proper guidance and assignments, young captains may struggle early in their career as an IO officer.

In addition to military background, interviewees also mentioned other background experiences to be beneficial to IO officers. Some described undergraduate degrees that would be beneficial, such as marketing, sales, communications, journalism, psychology, English, anthropology, political science, and history. Others talked about experience working in related areas such as marketing or sales as being helpful, as well.

There were a variety of personality traits/competencies that were mentioned as necessary for the job of an IO officer, as well. One of the most frequently mentioned was interpersonal skills. Several interviewees mentioned the crucial role interpersonal skills play in the act of integration, a primary duty for IO officers. One IO officer explained,

> If you're going to integrate, coordinate, and synchronize all those IRCs and you don't own them, you have to build teams and you have to be able to leverage those personal dynamics and those personal relationships to get things done.

Other specific interpersonal skills that were mentioned in the interviews were listening, communicating clearly orally and in writing, building relationships, influencing, negotiating, and the ability to sell yourself and your craft. The need for interpersonal skills may not be exclusive to IO officers, though, as one IO officer pointed out:

> Once you hit field grade, you got to have some interpersonal skills or you're not going to survive. . . . The requirement to have overly developed interpersonal skills is more a function of . . . having to fight our way into being important and relevant. I'm not sure you have to convince too many commanders anymore that what we do is relevant. . . . You do need exceptional interpersonal skills to overcome [working for a commander who previously had an incompetent IO officer] if you are that competent guy and you walk into that kind of a set up.

Another highly mentioned personality trait/competency that was mentioned repeatedly centered around confidence and action orientation. Several interviewees stated that being confident and action-oriented will help IO officers get engaged with the staff. Some took it a step further and stated that IO officers need to be aggressive so they are not marginalized in their jobs. Action orientation is important because,

> At the tactical and low operational level, if they're not prepared to be do-ers, if they think their whole role is to come and just think and give good ideas to the commander, they're going to quickly find themselves . . . quickly pushed to the side because they're not going to be considered to be value added. (IO officer)

Others mentioned being a self-starter and driven to do your best to be important qualities in IO officers. This is important because IO officers need to seek out information from others to be able to integrate. In a similar vein, being extraverted can be beneficial for IO officers because of how much they depend on others to do their job effectively.

In addition to extraversion, other interviewees suggested using personality assessment data to help determine what makes a good IO officer. It is not clear what personality characteristics would be considered most effective as IO officers, but research could be done to determine this information. There were other personality traits/competencies mentioned, as well, including being humble and open-minded; being a team player and willing to work with anyone and everyone; and possessing other leadership skills. In addition, understanding cultural awareness and competency is important when working in other cultures. As one commander explained,

> You got to have somebody that has a diverse view of the world because you may be very committed to your view of the world, but you at least have to have the ability to step back and say, "Ok, how will this be perceived by a culture that does this?" And you have to understand the world from other cultural perspectives. So I think there's a . . . cultural sensitivity, there's a cultural awareness. I'm not saying you have to be an expert in that culture. . . . You got to have somebody that's very attuned and adept to reading the population and the cultural environment and the operating environment to be able to do [IO].

Another area that was mentioned by several interviewees as essential to IO officers was intellectual capacity. As one IO officer explained, "You do want somebody who can think universally and categorically, who thinks conceptually – this is conceptual work. Guys who want matrices and the answers blocked out for them do poorly." Further, being able to think quickly is important for IO officers who frequently must adjust to changing environments. One commander talked about needing IO officers who can creatively solve problems, another skill related to intellectual capacity.

There are several ways the IPO could implement more rigorous selection standards for IO officers. As described above, attracting more officers to the functional area is one way to increase selection because with more options, the IPO could be more selective. In addition, the IPO could place more weight on potential IO officers' portfolios, modeling the selection process for promotion boards. Another option that was mentioned is for the QC to stay the same, but not be as lenient on passing students if they do not perform at a high enough level. One IO officer said, "It does not seem like the IO officer course is very willing to fail people right now. To my knowledge they have only failed three since they've been [teaching the QC] and they probably should've failed more than that." If the IPO was open to changing the nature of the QC somewhat, another option was outlined by an IO officer. He suggested having a selection course instead of a QC. Then the IPO could select people with a specific background and file, invite people to the course for about three weeks, and if they make it through the selection course, the IPO could then run a much shorter QC. Another option is for the QC to stay the same, but an advanced course could be introduced as was described in the "QC General Comments" section.

Finally, selection assessments could be developed and used to help determine applicants that are a good fit for the functional area. It is important to note that if the IPO wanted to create any selection criteria, more research should be done tying background, experience, and/or personality to actual measures of performance. The anecdotal evidence from the interviews could

be used to help guide the process, but should not be the sole foundation for developing selection measures.

This concludes the information collected that was specifically related to Personnel. There was no data collected related to Facilities.

Discussion and Recommendations

This report provides actionable recommendations across DOTMLPF for the IPO and also suggests directions for future research. For Doctrine, there were several recommendations to improve FM 3-13 for the next iteration of IO doctrine, with an emphasis on including more vignettes and graphics to help explain the concepts more clearly. Another improvement to doctrine that should be considered is ensuring consistency across all doctrine and nesting IO into other relevant doctrine to bring clarity to the topic of IO across the Army.

In regards to Organization, increasing IO education in PME would help commanders and staff officers understand IO and how to use it. In addition, it would be helpful to develop best practices, guidance, and examples of what an IO cell should look like to aid commanders when integrating IO into operations.

The major findings from the Training and Education section focused mainly on the IO officer QC. Overall, it would be beneficial to consider including more examples, vignettes, and practical exercises in the QC to facilitate deeper learning. In addition, assessment is an area in which IO officers could use more instruction in the QC, specifically focusing on the role of the CAO and intel analysts, and how to use atmospherics during assessment. There were many recommendations of where to place more focus in the QC, such as on targeting, written communication skills, the IO officers' role in garrison, cultural awareness, Army design methodology, and understanding the enemy. Further, including more detail on the IRCs, specifically placing more focus on MILDEC and CA, and less focus on COMCAM and OPSEC would benefit IO officers. However, there are limits to the amount of material that can be included in the QC, so using other means to educate IO officers on these topics need to be explored by the IPO to facilitate self-study. For example, providing access to POCs in the IRCs and the IRCs' communities of practice and websites, and/or directing IO officers to other relevant sources of information are a few potential ways to facilitate self-study.

Besides implications for the QC, the Training and Education section also touched on two other topics. One, the IPO should consider developing an advanced course in addition to the QC. Two, the IPO should consider ways in which training at the CTCs could be enhanced to better showcase IO to provide a place for IO officers to practice their role as a deployed S7 and help facilitate understanding of IO to commanders and staffs. Finally, ensuring experienced IO officers are sent to the CTCs to serve as OCTs would benefit IO officers going through the CTCs and again facilitate understanding of IO to commanders and staffs.

For Materiel, IO officers would benefit if the IPO worked on developing an online community of practice (or something similar) to organize the available tools and provide a shared resource for IO officers. It would also be beneficial to develop a tool (or utilize an already

existing tool) that allows IO officers to share information jointly and integrate with staff and equipment as well as a tool that helps visualize the IE.

Regarding Leadership, including more leadership development in the QC and for IO officers in general may benefit IO officers because they need to lead without formal authority. The IPO could work on a leader development program for all IO officers, focusing on developing IO officers' leader identity to increase their effectiveness.

The final section was Personnel. Some issues with manning were flushed out in the needs analysis, but the most practical solution the IPO could work on is popularizing the idea of creating and utilizing the IO cell to help mitigate undermanning at brigade and division. As mentioned previously under Organization, developing best practices, guidance, and examples of what an IO cell should look like might aid commanders to integrate IO into operations. Professional development was another area that could be improved by providing IO officers more information about broadening experiences, directed self-study, and transitioning from tactical to joint assignments through various communication channels to ensure the information reaches the widest possible audience.

In addition, the IO officer career path could be improved by changing the focus of the brigade S7 to a capstone job rather than an entry-level job to mitigate issues with sending IO officers from the QC directly to brigade. Finally, the functional area would benefit from the expansion of talent management for IO officers. Specifically, the IPO should work on increasing attraction of highly qualified officers to the functional area and develop selection criteria to increase the quality of IO officers.

Although the IO officer needs analysis uncovered many recommendations for improvement, the outlook for IO and the IO officer is positive. One commander summed up the importance of IO very well:

> I think Information Operations will continue to grow in importance, even as we return to decisive action, preparations for major combat operations, and across the full spectrum from humanitarian assistance, disaster response, all the way through to major combat operations. I think Information Operations will continue to increase in the complex world we live in, there's no question about it. So we need to work on making sure we select the best, we train them the best we can, and we integrate them.

Implementation of the recommendations requires future research in areas such as best practices in assessing IO and increasing talent management efforts by developing selection criteria for becoming an IO officer. Research in areas such as developing guidelines for best practices in developing effective messages to various audiences would also benefit IO officers. Such research will contribute to the development of IO in the future.

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