REPORT DOCUMENTATION PAGE

1. Report Security Classification: UNCLASSIFIED

2. Security Classification Authority:

3. Declassification/Downgrading Schedule:

4. Distribution/Availability of Report: DISTRIBUTION STATEMENT A: APPROVED FOR PUBLIC RELEASE; DISTRIBUTION IS UNLIMITED.

5. Name of Performing Organization:
  JOINT MILITARY OPERATIONS DEPARTMENT

6. Office Symbol: C	**7. Address**: NAVAL WAR COLLEGE 686 CUSHING ROAD NEWPORT, RI 02841-1207

8. Title (Include Security Classification): Relevant Joint Education at the Intermediate Level Colleges (UNCLASSIFIED)

9. Personal Authors: MAJ Gerald C. Kobylski, USA

10. Type of Report: FINAL	**11. Date of Report**: 4 February 2002

12. Page Count: 48   **12A Paper Advisor (if any): Professor David M. Goodrich**

13. Supplementary Notation: A paper submitted to the Faculty of the NWC in partial satisfaction of the requirements of the JMO Department. The contents of this paper reflect my own personal views and are not necessarily endorsed by the NWC or the Department of the Navy.

14. Ten key words that relate to your paper:

Joint Professional Military Education (JPME), Curricula Analyses at the Intermediate Level Colleges, Joint Specialty Officer, Phase I JPME, Phase II JPME, Joint Duty Assignment List (JDAL), Officer Professional Military Education Policy (OPMEP), Armed Forces Staff College, Relevant Joint Education, JTF Staff Responsibilities

15. Abstract:
   The leaders of our Armed Services continuously emphasize the importance of Joint Professional Military Education (JPME) for officers at all levels. Joint Vision 2020 states that the key to interoperability amongst the Services is joint education. Despite all of this emphasis, many leaders strongly believe that our JPME programs are inadequate. This paper analyzes the joint education officers receive at the Intermediate Level Colleges. The findings indicate that O4s are not receiving sufficient joint education from the Intermediate Level Colleges in all of the areas that will make successful in joint assignments. The analysis began with a survey in order to find out what skills are important in the joint operational environment. Then the analysis determined if the four Intermediate Level Colleges give appropriate coverage to these areas. The paper concludes with recommendations about what areas each College should add more emphasis on and with recommendations for further research that might be done in similar studies.

16. Distribution / Availability of Abstract:	**Unclassified** X	**Same As Rpt**	**DTIC Users**

17. Abstract Security Classification: UNCLASSIFIED

18. Name of Responsible Individual: CHAIRMAN, JOINT MILITARY OPERATIONS DEPARTMENT

19. Telephone: 841-6461	**20. Office Symbol:** C

Security Classification of This Page Unclassified

NAVAL WAR COLLEGE
Newport, R.I.

Relevant Joint Education at the Intermediate Level Colleges

by

Gerald C. Kobylski
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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature: _____

4 February 2002

Faculty Advisor: _____
David M. Goodrich

Report Documentation Page

Report Date	Report Type	Dates Covered (from... to)
04 Feb 2002	N/A	-

Title and Subtitle	Contract Number
Relevant Joint Education at the Intermediate Level Colleges	
	Grant Number
	Program Element Number

Author(s)	Project Number
	Task Number
	Work Unit Number

Performing Organization Name(s) and Address(es)	Performing Organization Report Number
Joint Military Operations Department Naval War College 686 Cushing Road Newport, RI 02841-1207	

Sponsoring/Monitoring Agency Name(s) and Address(es)	Sponsor/Monitor's Acronym(s)
	Sponsor/Monitor's Report Number(s)

Distribution/Availability Statement
Approved for public release, distribution unlimited

Supplementary Notes

Abstract
The leaders of our Armed Services continuously emphasize the importance of Joint Professional Military Education (JPME) for officers at all levels. Joint Vision 2020 states that the key to interoperability amongst the Services is joint education. Despite all of this emphasis, many leaders strongly believe that our JPME programs are inadequate. This paper analyzes the joint education officers receive at the Intermediate Level Colleges. The findings indicate that O4s are not receiving sufficient joint education from the Intermediate Level Colleges in all of the areas that will make them successful in joint assignments. The analysis began with a survey in order to find out what skills are important in the joint operational environment. Then the analysis determined if the four Intermediate Level Colleges give appropriate coverage to these areas. The paper concludes with recommendations about what areas each College should add more emphasis on and with recommendations for further research that might be done similar studies.

Subject Terms

Report Classification	Classification of this page
unclassified	unclassified

Classification of Abstract	**Limitation of Abstract**
unclassified	UU
Number of Pages	
50	

Professor, JMO Department

Abstract of

Relevant Joint Education at the Intermediate Level Colleges

The leaders of our Armed Services continuously emphasize the importance of Joint Professional Military Education (JPME) for officers at all levels. Joint Vision 2020 states that the key to interoperability amongst the Services is joint education wherein members of the joint team know and understand the full range of Service capabilities available to them. Despite all of this emphasis, many leaders strongly believe that our JPME programs are inadequate.

This paper analyzes the joint education officers receive at the Intermediate Level Colleges. The findings indicate that O4s are not receiving sufficient joint education from the Intermediate Level Colleges in areas that will make them successful in joint assignments. The analysis began by first surveying 34 officers, from O4 through O6, (three retired) in order to find out what skills are important in the joint operational environment. Then the analysis determined if the four Intermediate Level Colleges give appropriate coverage to these areas. The paper concludes with recommendations about what areas each College should add more emphasis on and with recommendations for further research that might be done for any similar future studies on this topic.

Table of Contents

Introduction and Thesis

The leaders of our Armed Forces have stated in Joint Vision 2020 that interoperability is the foundation of effective joint operations.[1] In the same Vision they noted that the key to this interoperability is joint education wherein members of the joint team know and understand the full range of Service capabilities available to them.[2] Numerous leaders, past and present, have spoken out about the importance of joint education. One of the first senior leaders to comment, General Shalikashvili, stressed, "Education is the foundation of jointness."[3] Admiral Blair, a former Director of the Joint Staff, also added that a key goal of Joint Professional Military Education (JPME) is that officers "come away with an understanding of how the other Services think, what their strengths and weaknesses are, and ideas on how they can build synergy of their forces with the other Services in the joint fight."[4]

Given the high importance of joint education to our senior leadership, are our education institutions providing the framework for this synergy and the necessary understanding for officers to be successful in joint assignments? To answer this question, one must analyze the education of our officers at every level from pre-commissioning through the War Colleges, an analysis beyond the scope of this paper. This study's focus is on the JPME that O4s receive at the Intermediate Level Colleges (ILCs). The findings in this paper indicate that O4s do not receive sufficient joint education from the ILCs in all of the areas that will make them successful in joint assignments. This analysis outlines the areas needing more coverage at the ILCs.

Background

Without a sufficient JPME program, it is difficult for the services to meet their fullest potential possible from the synergy effect that Admiral Blair discussed. Highlights from some after-

action reviews of joint operations support this paper's thesis that our officers do not receive sufficient joint education. For example, during Operation Bright Star '94, a multinational training exercise in Egypt, "the executive agent was not fully resourced or trained to operate as a JTF (Joint Task Force)…consequently, only a few persons within the JTF headquarters had knowledge of joint operations."[5] Another example of the lack of joint education on a joint staff is Operation Uphold Democracy. During this Operation in Haiti, "400 service members augmented 240 members of the 10th Mountain Division Staff, many of whom were not familiar with the staff processes being used by the JTF."[6]

A recent study by the Services and the Joint Staff also concluded that JPME is not yet meeting its fullest potential. During the summer of 1998, the JPME 2010 Working Group conducted this study, which was the first and only major study of the relevant areas of JPME found over the past 15 years. Combatant commanders conveyed to this Group that the "(junior) officers assigned to JTFs were unprepared to do the job and carry out their responsibilities" and that they felt "there was too much learning on the fly."[7] The Group also found that "officers assigned to JTF headquarters come with little or no JPME and / or joint experience."[8] Finally, the Group noted that there is an "operational necessity" to have better joint education in order to meet our nation's war fighting demands.[9]

Before addressing the thesis that O4s are not receiving sufficient joint education from the Intermediate Level Colleges in all of the areas that will make them successful in joint assignments, this paper first explains some important policies and procedures that are relevant to this study. The first relevant policy is the Chairman of the Joint Chiefs of Staff's Officer Professional Military Education Policy (OPMEP). In order to meet Joint Vision 2010's guidance in joint education, the

Chairman established in the OPMEP five learning areas with several sub-categories for each ILC to cover in its curriculum; these areas and sub-categories are available in Appendix A.[10] The OPMEP does not require that the ILCs devote a specified number of hours to each area, only that they give appropriate coverage to them. Every few years, representatives from the Joint Staff examine the ILCs' curricula in order to determine if there is appropriate coverage.

The O4 population that can find themselves in a joint assignment and thus require specific joint skills is quite large. In recent years the Joint Duty Assignment List (JDAL) has fluctuated between 9,172 and 9,359 billets, about 3,766 of which are O4s.[11] The Goldwater-Nichols Act requires the Department of Defense to fill 50percent of these billets (about 4,650) with Joint Specialty Officers (JSOs) or JSO nominees. [12] This corresponds to about 1,858 O4s. JSOs are those officers who have completed Phases I and II of JPME and a joint tour in a JDAL billet.[13] Officers earn Phase I qualification by graduating from any one of the four ILCs, while officers obtain Phase II qualification by completing the 12-week course at the Armed Forces Staff College (AFSC). [14] Officers (O5s and O6s) who graduate from the National Defense University also receive Phase II qualification.[15] A JSO nominee is an officer who has completed Phases I and II and is presently in a joint billet. [16]

The AFSC graduates approximately 884 officers every year, nearly all of whom are destined to fill the 9000 plus joint duty assignments.[17] If one assumes that a Phase II graduate remains in a billet for an average of three years, something that is highly optimistic, then over a three year period, all of the Services can provide approximately 2,650 Phase II qualified O4s. This number meets the number of 1,858 officers required by Goldwater-Nichols; however, it also means that there are still roughly 1,106 O4s who are in joint assignments and not Phase II qualified.[18] This

numerical analysis does not take into account the numerous joint requirements needed for the *ad hoc* JTFs that are formed.

Service headquarters usually provide officers to *ad hoc* JTFs without consideration of their JPME background.[19]

> "Currently, the United States has ten standing JTFs and six *ad hoc* JTFs operating around the world, involving some 50,000 service people. Another 20 headquarters and forces (for example XVIII Airborne Corps, the 6th Fleet) are designated as JTFs in plans. This means that approximately 2,600 officers assigned to these headquarters must be sufficiently joint proficient to operate as a JTF at a moments notice."[20]

For these 2,600 officers serving on Service staffs there is no formal requirement for joint education, even though these same staffs "form the planning and execution nucleus of the JTFs."[21] The fact that majors and lieutenant commanders plan and direct a good majority of the JTF operations further compels the need for sufficient JPME for all O4s. [22]

A JPME Study conducted in 1999 noted the importance of the JTF in stating, "The crisis response mechanism of choice today is the JTF."[23] Despite the importance of the JTF, few officers assigned to JTFs have the necessary joint education. Compounding the problem, many of the officers who have the opportunity to go to the AFSC for Phase II JPME, do not go until well into their joint tour. For those officers who have not attended the AFSC, there is not much time for on the job training to make up for their lack of joint education.[24]

The point in the preceding paragraphs is that the Phase II joint education program at the AFSC does not reach all of the O4s in joint assignments. Yet as CAPT William Nash, an instructor in the Joint Military Operations Department at the Naval War College commented, "An O4 showing up for his (or her) first joint tour should have had Phase I and Phase II training."[25] A

reasonable conclusion then is that the Services should educate their O4s as if there was no opportunity for Phase II education at the AFSC. The challenge of ensuring that as many O4s as possible receive sufficient JPME falls directly on the ILCs.

The question the thesis of this paper seeks to answer is whether the ILCs are meeting this challenge, or in other words, does the current Phase I education at the ILCs provide sufficient JPME? An initial investigation showed that the current education structure at the ILCs teaches officers to be great Service tacticians up to O6, but not very good joint officers.[26] Data from as far back as 1994 indicates that the average pretest score for those students arriving at the AFSC to be 45percent on joint issues.[27] This suggests that students graduating from the ILCs Phase I qualified, have not mastered a broad knowledge of joint issues.[28] An officer currently in a joint assignment conveyed to me that not even the 12-week Phase II course appropriately prepared him for his joint tour because it was too focused on deliberate and crisis action planning.[29] He further added that the Services need to produce well-rounded joint officers who can work across the spectrum of duties they will encounter.[30] This well-rounded joint officer needs to be the product of the ILC.

Methodology

The first step in a proper analysis of joint education is to determine if the JPME objectives that the OPMEP states are relevant. The second step is to restructure the JPME objectives so they are relevant. Once any required restructuring is complete, the third and final step is to compare the curricula of the ILCs to the updated list of objectives. To complete all of these steps would take more than the number of pages allotted for this paper. Rather than attempting to validate the JPME objectives, this research focuses on finding out if the ILCs are teaching what is important.

Before determining if the ILCs are teaching the skills that are important, it is first necessary to determine the skills that are important. This investigation began by speaking with several officers (some retired) with joint experience to find out what they felt were the important knowledge and skill areas for JPME. Few specific areas resulted from this procedure. The solution was to develop a survey that would target senior and junior officers and attempt to determine what skills or knowledge areas O4s require in a joint assignment.

One of the two teams within the JPME 2010 Working Group, the Requirements Team, developed an in-depth survey directed at officers in joint assignments in order to analyze the current state of JPME. The Team based its survey on AFSC Publication 1, with emphasis on multinational operations, information warfare, and Joint Vision 2010.[31] The Requirements Team's survey served as a starting point or base for this analysis.[32] All skills that were not related in any way to the operational level of warfare were deleted from the Requirements Team's survey. Those skills that initial research from interviews indicated as important, and were not on the Requirements Team's survey, were then added to this survey. The resulting survey, enclosed in Appendix B, contained 56 knowledge areas.

The target of this study's survey was a group of officers who had served in joint assignments while in the grades O4-O6. The intent was to obtain perspectives from O4s who had recently come from joint assignments and from those who supervised O4s in joint assignments. A total of 34 officers from all of the Services responded to the survey, 31 were in grades O4-O6 and three were former O6s; all 34 had at least one joint tour.

The survey asked the officers to rate the knowledge areas and skills required to perform effectively in a joint operational environment. For each skill, officers could respond very low, low,

average, high, very high, or leave it blank if they were not sure of an area. Additionally, all of those surveyed had the opportunity on the final sheet of the survey to add any comments or areas that they thought the survey did not address.

Analysis of Survey Results and Intermediate Level College Curricula

The spreadsheet on pages 32 and 33 of Appendix C contains every numeric response for all of the skill areas evaluated by those surveyed. On page 35 of Appendix C is a table that contains the response averages for each of the 56 areas. Finally, on page 37 of Appendix C is a ranking of the 56 skill areas based on the averages of the 34 surveys. As can be seen in this table, the most important area, with an average of 4.484, came out to be Command Relationships [Combatant Command (COCOM), Operational Control (OPCON), Tactical Control (TACON), etc.]. As shown in the analysis of each ILC curriculum in the following pages, several areas that lack coverage fall into the top five rated areas. Appendix D contains the differences in responses between the senior and the junior officers.

A surprising result of the survey was that of the 56 knowledge and skill areas, only one had an average of below three; a three was defined to be average importance. The area with an average below three was the Development and Validation of Joint Publications. A reasonable conclusion is that although this survey may not have included every skill required of an O4 in a joint assignment, it certainly did include a lot of them. A few officers noted important areas they felt the survey missed. These areas were: functions of governmental agencies; military support to civil authorities; intelligence capabilities and resources; PPBS; and finally, knowledge of a Commander in Chief's theater engagement plan, priorities, key players, and countries within the region. These

areas appeared only once in the comments area of the survey and therefore were not included in any further analysis.

An important step in this research was to determine what knowledge areas, of the 56 in the survey, were important enough to include in the curricula investigation. The criterion for selection was for the area to have an average of four or greater from all 34 officers; this resulted in the 17 areas shown in Appendix E. The reason for this criterion was that if officers responded with a four or five for a given area in the survey, they felt that that the area was either important or very important.

In addition to these 17 knowledge areas, several officers felt that the following areas were essential to being a successful joint officer: Joint Operational Planning and Execution System (JOPES), the Time-Phased Force Deployment Data (TPFDD), and Rules of Engagement / Operational Law. The averages for these three areas from the surveys were 3.968, 3.903, and 3.625 respectfully. The first two areas, JOPES and the TPFDD, were added to the curricula analysis list because of their proximity to a score of four. Appendix E contains the resulting 19 knowledge and skills areas used in this analysis.

Several of those surveyed pointed out on the survey that officers in different joint assignments, like a combatant command or a functional command, would respond differently to the survey based on their assignment. Thus, they felt that answers from the survey would be skewed based on the officer's joint position. For example, an O4 serving in an Information Operations (IO) billet would require a higher level of knowledge in IO areas and thus would say that these areas were very important for joint education. These officers were correct in this regard, as officers appeared to rate areas in their specialty higher. Officers also noted that there are a huge variety of

skills an officer in a joint assignment must posses since the JDAL encompasses so many different positions. These comments might lead one to conclude that the idea of trying to come up with a single list of areas important for JSOs is hopeless. This author disagrees. In order to properly educate JSOs, ILCs need to have a basic set of skills that they need to teach. An analogy is an Army unit's Mission Essential Task List (METL). This list identifies the tasks that a unit must be completely trained on and thus it is the focus of the unit-training program. Like the variety of skills for officers in joint assignments, there are many different skills the soldiers in an Army unit need to possess. However, its training program includes only those skills from the METL and not those of the specialty fields like communications, supply, and maintenance.

The next step in this analysis was to investigate the curricula at the four ILCs to see if they cover the relevant 19 skills. A major deficiency with the 1998 Requirements Team's study was the manner in which it determined if the institutions were covering the topics it was investigating; the Team asked the ILCs their opinion on how well they covered the topics from the survey in their curricula.[33] Since the Team recognized it would be difficult for any course director to be impartial in such an important study, it recommended, "Additional in-depth JPME and Service specific core curriculum analysis is essential in order to make detailed educational emphasis comparisons."[34] This author encountered this same feeling of "protectiveness" when speaking to the people who held responsibility for the joint programs at the ILCs.

The solution to this problem of "protectiveness" was threefold; in addition to asking responsible individuals from the JPME programs about their coverage of the important areas, this study also investigated the JPME curricula of the ILCs, and then surveyed some graduates of the ILCs to find out their opinions with respect to the coverage. Moderators at the ILCs usually have a

lot of flexibility in their seminars; as a result, just because a topic may be on a particular syllabus, it

may not mean that every seminar (moderator) in the course discusses the topic in sufficient detail.

This is another reason that this analysis relied on a combination of the three items mentioned above.

A final note about the conduct of this analysis is that it did not include any electives. A majority of

the ILCs have several electives that go into depth on some aspects of JPME. But being electives,

only a small percentage of the graduates take these courses.

The table in Appendix F summarizes how well each of the ILCs cover the 19 areas

identified as important. The areas not covered by the ILCs have an "X" adjacent to them. Those

areas marginally covered have an "M" adjacent to them. In this analysis, a clear indicator of

marginal coverage was when the syllabus or director used the phrase "touches on." An empty box

in the table indicates substantial coverage. The assessment of strength of coverage was based on a

subjective evaluation of the three areas mentioned previously: syllabus analysis, course author

feedback, and graduate responses. This analysis found numerous areas that were either not

covered or marginally covered.

The curricula analysis begins with the Naval Command and Staff School. A majority of the

joint education at this College comes from the Joint Maritime Operations (JMO) Department.

Although this Department does not cover every area identified in this paper as important, it does the

best job of the four ILCs. A search through the JMO syllabus [35] and comments from seminar

leaders revealed one area not covered, Liaison Officers and Their Responsibilities. The analysis

also revealed four areas that were marginally covered: Organization for National Security; JTF

Types; Functions of an Operations Planning Team (OPT) / Joint Planning Group (JPG); and

Command Relationships. One of these, Command Relationships, the surveyed officers rated as the

most important skill (Appendix C). For Command Relationships, there is little emphasis at the

Naval School on the definitions and relationships between Combatant Command, Operational

Control, and Tactical Control. The reason for the conclusion that Organization for National

Security is only marginally covered is as follows: although there is much discussion in the course on

the National Command Authority and National Security Council, there is marginal discussion on the

organization of the Department of Defense and the military departments. Another area the Naval

School marginally covers is JTF Types. Although the Naval School spends considerable time

studying a JTF that is formed in a crisis, there is little time spent studying *ad hoc* JTFs. A graduate

of this School confirmed that JTF Types and Command Relationships receive marginal coverage.[36]

In Appendix F these two areas are in boldface.

The analysis of the Marine Corps Command and Staff College curriculum centered on a

synopsis provided by COL Robert Wagner, a designated representative for the curriculum's joint

accreditation program. This synopsis, which addressed all of the joint topics in the College's JPME

program and included the amount of coverage by hour for each topic, revealed that the College

covers or marginally covers every topic.[37] There are five areas that this College marginally covers:

Types of JTF Orders; Liaison Officers and Their Responsibilities; JTF Types; JTF Authority; and

Command Relationships. Two of these rank in the top five areas of importance, Command

Relationships (ranked first) and JTF Authority (ranked fourth). A graduate of this College

confirmed marginal coverage for JTF Authority, and Interagency, Host Nation, and Multinational

Coordination.[38]

Although there is not as much depth as some of the other ILCs, the Air Command and Staff College covers the 19 areas fairly well in breadth. CDR Andy Catlett, the Deputy Chairman of Joint Warfare Studies, provided a course description for the joint curriculum at this College which consists of two courses, Joint Force Employment and Joint Campaign Planning.[39] Comments from CDR Catlett [40] and from graduates of the Air Force Staff College, [41] and an analysis of the two courses resulted in the conclusion that the curriculum either covers or marginally covers every one of the 19 areas. There are five areas that the College only marginally covers: Roles of the Joint Staff Officer; the TPFDD; Functions of an OPT and JPG; Liaison Officers and Their Responsibilities; and Interagency, Host Nation, and Multinational Coordination. Although the College covers Host Nation, and Multinational Coordination, it does not appear to cover Interagency Coordination.

The Army Command and General Staff College has the most areas that are either not covered or marginally covered, 8 of 19, all shown in Appendix F. This conclusion was based on an investigation of the syllabus of C500, Fundamentals of Warfighting,[42] and a conversation with the course author, Professor John Cary.[43] A study done in 1999 on the JPME program at this College concluded that although "joint matters are discussed in many parts of the curriculum and a full thirty percent of the core curriculum is joint, emphasis on joint matters tends to take a back seat to Army tactics."[44] An example of this is that "practical exercises give credit to the other services but often capabilities and limitations are unrealistically portrayed" because of the lack of a good service mix in the classroom.[45] The C500 syllabus indeed presents Army tactics in a joint perspective, but sometimes "in reality, this lack of service expertise in the classroom causes skewed instruction."[46] Professor Cary admitted that he has organized his course such that the "course is not very deep, but it is very wide (in coverage)." [47]

Looking at all four ILCs simultaneously in Appendix F, one notices that there is one area that all of the ILCs need to cover in greater depth, Liaison Officers and Their Responsibilities. Two ILCs marginally cover this area and two do not cover it at all. Also, there are two areas that three of the four ILCs either do not cover or marginally cover, JTF Types and Functions of an OPT and JPG.

As mentioned previously, the major shortfall of the JPME 2010 Working Group's Study was the way it evaluated the ILCs' curricula. Like the survey conducted by the JPME 2010 Working Group, this survey also possesses some potential shortfalls. First and foremost is this author's subjective evaluation of what is in the syllabus of each ILC. The combination of a syllabus analysis, instructor feedback, and graduate responses sought to minimize this shortfall. However, the findings that reflect all three of these are also subjective. In retrospect, someone who is conducting a similar investigation and is not constrained by space or time should focus on interviewing numerous officers who graduated in the past year; officers surveyed in this study had graduated in the last several years. The surveying of graduates of course would take place after first determining the relevant knowledge areas.

Another potential shortfall of this analysis concerns the statistical significance of the data utilized. Although 34 responses from this survey were received, this number is not strictly statistically significant.[48] As mentioned, the JDAL encompasses many different positions, resulting in a variety of skills. This fact does not lessen the need for educators to have a basic set of skills or objectives that need to be taught. The way to obtain statistical significance for an investigation would be to aggregate the JDAL billets at the lowest feasible level for a given study and then survey

approximately 50 officers from each level. An appropriate method would be to organize by staff assignment such as J1, J2, etc.

The focus of this paper has been on determining if our Services can do better in JPME at the ILCs, and if so, how. Many might argue that the service schools should not devote any more time than they already do to JPME and that their focus must be on service specific knowledge. They might further add that anything less than service specific knowledge will erode the competencies of the Services' officer corps and that the Services must train their future commanders.[49] If the ILCs add emphasis to the areas noted in Appendix F, they can easily delete some of those JPME topics that are of less importance, like those that are ranked near the bottom of the 56 areas shown in Appendix C. The idea of deleting topics of course always creates considerable disagreement amongst faculty. However, the ILCs must not focus their JPME learning objectives on what the faculty thinks is important, but on what the officers from joint assignments say is important.

Earlier in this paper, after-action review comments were cited from several operations about the lack of adequate JPME. Some might argue that there are numerous examples of successful *ad hoc* joint operations, like JTF Panama and JTF Somalia, wherein staff officers did exceedingly well.[50] Indeed, there are probably numerous success stories for JPME. However, this analysis is not about determining if there have been more successful or unsuccessful illustrations of JPME in the field. The bottom line is that many officers feel that they arrived at their assignment without the prerequisite skills to be successful. In this sense, joint education has not yet met its fullest potential.

Conclusions

The JPME 2010 Working Group concluded "if we continue with *ad hoc* JTFs in the future, junior officers need a fundamental knowledge of JTF operations before they are assigned to a JTF."[51] They also noted that since there are so many ways officers can find themselves in a joint assignment, all officers should receive a fundamental level of joint education.[52] This paper attempted to determine what this fundamental knowledge should be (Appendix B) and how the ILCs could modify their curricula (Appendix F) so that all O4s might receive a standard joint education. A survey of officers with joint experience formed the basis in this research for determining what skills are important in order to be successful in joint assignments.

The first step toward a standard joint education is for the OPMEP to properly reflect the needs of officers in joint positions. Although an analysis of the OPMEP objective areas was beyond the scope of this paper, initial observations lead this author to conclude that the OPMEP does not properly reflect the needs of officers in joint positions. Additionally, different course authors at the four ILCs believe different knowledge areas are relevant; this is one reason why the joint curricula from the ILCs vary so much. Once the OPMEP becomes relevant, the directors of JPME at the ILCs can develop a solid standard joint education program from the OPMEP.

Recommendations

Based on the analysis in this paper, the following recommendations are offered:

1. The directors or the course authors of the JPME curricula at the four ILCs should add emphasis to their JPME curricula according to the knowledge areas identified in Appendix F.

2. Each ILC should maintain close ties with the joint community and update its curriculum based on current needs of O4s in joint assignments. Unless the OPMEP is validated more frequently, the ILCs should not wait for this validation to modify their curricula.

3. The need for relevant JPME is critical to the success of our officers serving in a joint environment. All of the ILCs should change the focus from a service-oriented education with some joint education to a joint education with some service education.[53] A way to do this is to combine more elements of Phase II with Phase I, or even to embed the 12-week AFSC course in all of the ILCs.[54] This make sense since not all officers working in joint assignments have the opportunity to attend Phase II schooling at the AFSC. Some professors in the Joint Maritime Operations Department at the Naval War College already structure their classes similar to that at the AFSC.[55]

4. Adding topics to an already packed syllabus is not an easy feat for any course author. Other possibilities exist that can increase the level of JPME at the ILCs. One possibility is to have adjunct faculty teach Phase II at service schools, perhaps at night or even in electives.[56] Officers going to joint assignments should take these courses.

Recommendations For Further Research

A proper analysis of JPME must first begin with the validation of the OPMEP objectives. The Joint Staff must ensure that these objectives are fitting the bill for what our O4s in joint billets need. Based on the updated OPMEP objectives, the Joint Staff should evaluate the curricula of the ILCs. This would solve the problem that Professor Cary, the Director of the joint course at the Army's ILC points out; when evaluating JPME curricula "everyone understands joint education differently." [57] The O4s in joint billets are the ones who should decide what areas in JPME are

important. The best way to obtain this information is by surveying these officers. As mentioned

earlier, a good survey would include approximately 50 officers from each major staff area.

Endnotes

[1] United States Chairman of the Joint Chiefs of Staff. Joint Vision 2020. (Washington, DC: June 2000), 15.

[2] Ibid.

[3] General John M. Shalikashvili, "Joint Education: More Vital Than Ever." JPME On-Line: the Joint Professional Military Newsletter, (February 1994):1.

[4] Michael Carney, "Joint Professional Military Education 1999: Where to Now?" (Army Command and General Staff School, Fort Leavenworth, KS: 1999), 16.

[5] Michael T. Endres, "Preparing Officers for Joint Duty: An Analysis of U.S. Joint Professional Military Education," (Naval War College, Newport, RI: 2000), 5.

[6] Ibid., 6.

[7] United States Chairman of the Joint Chiefs of Staff. Joint Professional Military Education 2010 Study. (Washington, DC: 1998), 2.

[8] Ibid., 2.

[9] Ibid., 6.

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[12] United States Department of Defense, Office of the Inspector General. Joint Professional Military Education: Phase II, Evaluation Report. (Arlington, VA:, 1998), 3- 4.

[13] Ibid.

[14] Ibid.

[15] Ibid.

[16] Ibid.

[17] Michael Carney, 2.

[18] 3,766 O4 joint billets minus 2,650 phase II graduates equals 1106 O4s.

[19] United States Chairman of the Joint Chiefs of Staff. Joint Professional Military Education 2010 Study. (Washington, DC: 1998), 10.

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[29] MAJ Rich Gannon, J5 Staff, Strategy and Policy, Korea. <gannonr@usfk.korea.army.mil> "Joint Education." [E-mail sent to Gerald Kobylski <Kobylski@aiconnect.com>] 20 December 2001.

[30] Ibid.

[31] United States Chairman of the Joint Chiefs of Staff. Joint Professional Military Education 2010 Study. (Washington DC: 1998), 9.

[32] Ibid, B-7. The electronic file for this survey was obtained through the Naval War College Library. The file was then modified to fit the needs of this study as described in the main body of this paper.

[33] Ibid., 6.

[34] Ibid., 50.

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[36] CMDR Erica Biron, USN, Deputy Dean of Students, Naval War College, Newport, RI. A recent graduate of the Naval Command and Staff School, she completed a survey explaining how well the Naval School covered the areas identified in this analysis.

[37] COL Robert Wagner, Faculty Advisor, Marine Corps Staff College, <wagnerrp@tecom.usmc.mil> "Naval War College Research." [E-mail to Gerald Kobylski <Kobylski@aiconnect.com>] 7 January 2002 and 29 January 2002. He provided a synopsis of JPME in the Marine Corps curriculum.

[38] LTC Steven Peters, USMC, Student, Naval War College, Newport, RI, <peterss@nwc.navy.mil> "Thanks" [E-mail to Gerald Kobylski <Kobylski@aiconnect.com>] 9 January 2002. The confirmed areas are boldface in Appendix F.

[39] CDR Andy Catlett, USN, Deputy Chairman, Joint Warfare Studies, Air Command and Staff College, Montgomery, AL, <Andy.Catlett@MAXWELL.AF.MIL> "Naval War College Research." [E-mail to Gerald Kobylski <Kobylski@aiconnect.com>] 17 January, 2002.

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[41] MAJ Alex Heidenburg, USA, Assistant Professor, United States Military Academy, West Point, NY, <aa5178@exmail.usma.army.mil> "Need a Favor." [E-mail to Gerald Kobylski <Kobylski@aiconnect.com>] 13 January 2002. Also, Lt Col John D. Silvia, USAF, Student, Naval War College, Newport RI. <silviaj@nwc.navy.mil> "Naval War College Research." [E-mail to Gerald Kobylski <Kobylskg@nwc.navy.mil>] 14 January 2002.

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Appendix A

Joint Professional Military Education Learning Areas And Objectives For Intermediate-Level PME Institutions

Area 1: National Military Capabilities and Command Structure

1a. Comprehend the capabilities and limitations of U.S. military forces.

1b. Explain the organizational framework within which joint forces are employed.

1c. Explain the purpose, roles, functions, and relationships of the National Command Authorities (NCA), National Security Council (NSC), Chairman, Joint Chiefs of Staff (CJCS), Joint Chiefs of Staff, combatant commanders, joint force commanders (JFC), and combat support organizations.

1d. Summarize how joint force command relationships and directive authority for logistics support joint warfighting capabilities.

1e. Comprehend how the U.S. military is organized to plan, execute, sustain, and train for joint, interagency, and multinational operations.

Area 2: Joint Doctrine

2a. Comprehend current joint doctrine.

2b. Understand the factors influencing joint doctrine.

2c. Formulate and defend solutions to operational problems using current joint doctrine.

2d. Comprehend the relationship between Service doctrine and joint doctrine.

Area 3: Joint and Multinational Forces at the Operational Level of War

3a. Comprehend the considerations for employing joint and multinational forces at the operational level of war.

3b. Explain how theory and principles of war apply at the operational level of war.

3c. Develop an ability to plan for employment of joint forces at the operational level of war.

3d. Comprehend the relationships among national objectives, military objectives, and conflict termination, as illustrated by previous wars, campaigns, and operations.

3e. Comprehend the relationships among the strategic, operational, and tactical levels of war.

Area 4: Joint Planning and Execution Processes

4a. Through the framework provided by joint planning processes, explain the relationship between national objectives and means availability.

4b. Comprehend the effect of time, coordination, policy changes, and political development on the planning process.

4c. Explain how defense planning systems affect joint operational planning.

4d. Comprehend how national, joint, and Service intelligence organizations support joint force commanders (JFC).

4e. Comprehend the fundamentals of campaign planning.

Area 5: Information Operations (IO) and Command, Control, Communications, and Computers (C4)

5a. Understand how command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) systems apply at the tactical and operational levels of war and how they support a joint information operations (IO) strategy.

5b. Comprehend how IO must be integrated to support national and military strategies.

5c. Comprehend how IO is incorporated into both the deliberate and crisis action planning processes at the operational and JTF levels.

5d. Comprehend how opportunities and vulnerabilities are created by increased reliance on information technology throughout the range of military operations.

Appendix B

Survey

Rate the knowledge areas and skills required to perform effectively in a joint operational environment. If you are not sure of an area, please leave blank.	IMPORTANCE				
	1 — VERY LOW	2 — LOW	3 — AVERAGE	4 — HIGH	5 — VERY HIGH
NAME:					
JOINT BACKGROUND (ORGANIZATION)					
A. JOINT STAFF OFFICER					
A1. Development and validation of joint publications	1	2	3	4	5
A2. Joint Professional Military Education (JPME) process (for example, Phase I, Phase II)	1	2	3	4	5
A3. History of joint and multinational operations	1	2	3	4	5
A4. Principles of war (for example, mass, objective, offensive, etc.)	1	2	3	4	5
A5. Elements of national power (for example, diplomatic, economic, etc.)	1	2	3	4	5
A6. Professional resources (for example, Internet, Joint Universal Lessons Learned, Joint Electronic Library, agency resources)	1	2	3	4	5
B. JOINT ORGANIZATION AND STAFF FUNCTIONS					
B1. Organization for national security (for example, National Command Authorities, National Security Council, DoD, military departments)	1	2	3	4	5
B2. Sister service organization (USAF, USCG, USN, USA, USMC)	1	2	3	4	5
B3. Joint staff organization (for example, composition, authority, responsibilities)	1	2	3	4	5
B4. Combatant commands (for example, missions, unified command plan relationships, command authority)	1	2	3	4	5
B5. Roles of the joint staff officer (for example, briefings, papers, staff studies)	1	2	3	4	5
C. JOINT PLANNING PROCESS					
C1. Joint Operation Planning and Execution System (JOPES)	1	2	3	4	5
C2. Deliberate Planning process	1	2	3	4	5
C3. Deliberate plans (for example, OPLAN, CONPLAN, functional plan, theater engagement plan)	1	2	3	4	5
C4. Crisis Action Planning process (for example, initiation, concept development)	1	2	3	4	5
C5. Service specific planning systems and adaptive planning	1	2	3	4	5
C6. Civil Military Operations planning (for example, relations with non-governmental organizations, private volunteer organizations)	1	2	3	4	5
D. FORCE PLANNING CONSIDERATIONS					
D1. Joint Strategic Capabilities Plan (JSCP)	1	2	3	4	5
D2. Force planning (including guard, reserve, and civilian integration)	1	2	3	4	5
D3. Support planning (for example, logistics, medical, civil engineering, and procurement)	1	2	3	4	5
D4. Full Dimensional Protection (for example, Weapons of Mass Destruction defense, Theater Missile Defense)	1	2	3	4	5
D5. Transportation planning (including shortfall identification and feasibility analysis)	1	2	3	4	5

D6. Time Phased Force Deployment Data (TPFDD) refinement	1	2	3	4	5
E. MULTINATIONAL PLANNING AND OPERATIONS					
E1. Organization and command relationships	1	2	3	4	5
E2. Peace operations missions (for example, peacekeeping and peace enforcement)	1	2	3	4	5
E3. Diplomacy (for example, political-military considerations and Department of State interaction)	1	2	3	4	5
E4. Coalition considerations (including United Nations issues)	1	2	3	4	5
E5. Legal concerns (for example, Rules of Engagement and Status Of Forces Agreements)	1	2	3	4	5
E6. Psychological Operations and Civil Affairs	1	2	3	4	5
E7. Regional expertise (for example, culture, language, politics)	1	2	3	4	5
E8. Media relations	1	2	3	4	5
F. INFORMATION OPERATIONS					
F1 Technology (for example, computer systems, information security, space Systems)	1	2	3	4	5
F2. Organization and systems (for example, command and control, networks and grids)	1	2	3	4	5
F3. Methods and elements (for example, deception, electronic warfare, information warfare, and global command and control system)	1	2	3	4	5
G. JTF MISSIONS					
G1. Event flow during situation development (OPREP-3, Commander's Estimate, etc.)	1	2	3	4	5
G2. Types of orders (Warning, Deployment, Execution, etc.)	1	2	3	4	5
G3. Types of Operational Areas [Joint Operations Areas (JOA), Joint Special Operations Area (JSOA), Joint Rear Area (JRA), etc.]	1	2	3	4	5
H. JTF ORGANIZATION					
H1. JTF Types	1	2	3	4	5
H2. Functions of a Deployable Joint Task Force Augmentation Cell (DJTFAC)	1	2	3	4	5
H3. Functions of a Operations Planning Team (OPT) / Joint Planning Group (JPG)	1	2	3	4	5
I. JTF KEY SYSTEMS					
I1. Joint Operational Planning and Execution System (Global Command and Control Systems, joint and theater-unique systems, etc.)	1	2	3	4	5
I2. Common communication systems (TRITAC, NATO CRONOS, etc)	1	2	3	4	5
J. JTF COMMAND RELATIONSHIPS (unity of command/unity of effort)					
J1. Authority	1	2	3	4	5
J2. Command relationships [Combatant Command (COCOM), Operational Control (OPCON), Tactical Control (TACON), etc.]	1	2	3	4	5
J3. Liaison officers and their responsibilities	1	2	3	4	5
K. JTF REPORTING REQUIREMENTS					
K1. JTF reporting responsibilities and types of reports (OPREP, SITREP, etc.)	1	2	3	4	5
K2. Readiness reporting	1	2	3	4	5
L. JTF STAFF SPECIFIC RESPONSIBILITES AND CHALLENGES					
L1. C4IC (C2 architecture, intelligence systems, etc.)	1	2	3	4	5
L2. Military operations other than war	1	2	3	4	5
L3. Combating terrorism	1	2	3	4	5
L4. Rapidly building the JTF team	1	2	3	4	5

L5. Interagency coordination, host nation and multinational coordination	1	2	3	4	5
L6. Air space management	1	2	3	4	5
L7. Major operations in the littorals	1	2	3	4	5
L8. Coordination of fires	1	2	3	4	5
L9. Information Management	1	2	3	4	5

PLEASE ADD ANY TOPICS YOU BELIEVE WOULD HELP YOU (OR YOUR SUBRODINATES) PERFORM EFFECTIVELY IN A JOINT OPERATIONAL ENVIRONMENT. USE THE BACK OF THIS PAGE IF NECESSARY. PLEASE RETURN THE QUESTIONNAIRE TO MAJ KOBYLSKI. THANK YOU VERY MUCH FOR YOUR ASSISTANCE.

Appendix C

Survey Results

The columns titled 1-15 on page 32 contain the responses from senior O5s, O6s, and former officers; these are labeled Group 1. Columns a-s contain the responses from O4s and O5s (more junior that those in Group 1); these are labeled Group 2. Those cells that are blank are those areas where the person surveyed did not have sufficient knowledge to respond. On page 35 in this appendix is a table containing three columns of response averages. The first column contains the averages of all surveyed for each skill area. The second column contains the averages of Group 1 (O6s and retired). The third column contains the averages of Group 2 (O4s and O5s).

At the end of this Appendix C on page 37 is a ranking of the 56 skill areas based on the averages of the 34 surveys. As can be seen in this table, the most important area, with an average of 4.484, came out to be Command Relationships [Combatant Command (COCOM), Operational Control (OPCON), Tactical Control (TACON), etc.].

Knowledge Areas	Group 1 Responses														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A1. joint publications	3	3	3	2	4	3	4	4	4	2	2	2	2	1	3
A2 JPME process	2	4	4	2	4	5	4	3	5	4	3	2	3	1	4
A3. History	4	3	4	2	3	3	4	3	3	2	4	2	4	3	2
A4. Principles of war	4	4	2	2	3	5	4	4	5	4	5	4	2	1	3
A5. Elements	5	5	3	4	3	5	4	3	4	4	5	4	5	3	4
A6. resources	4	4	4	2	4	5	4	4	3	3	4	5	5	5	2
B1. national security org	4	4	3	3	5	5	5	3	5	4	4	4	5	4	5
B2. service organization	4	3	4	3	5	4	5	3	4	3	5	4	4	4	4
B3. Joint staff organization	4	3	4	3	5	5	5	4	5	3	4	4	5	4	5
B4. Combatant commands	5	4	4	3	4	5	5	4	5	3	4	4	5	4	5
B5. Roles	4	4	5	3	5	4	5	5	3	4	3	4	4	4	5
C1. JOPES	5	5	5	3	5	5	5	3	5	4	3	4	5	4	4
C2. Deliberate Planning	5	5	5	4	5	4	5	4	4	4	4	5	5	4	4
C3. Deliberate plans	5	5	5	4	4	4	5	4	4	3	4	4	4	4	4
C4. Crisis Action Planning	5	5	5	4	4	5	5	4	5	5	5	5	5	4	4
C5. Service specific planning	5	3	4	3	4	5	5	5	4	3	4	4	4	4	4
C6. Civil Military Operations	5	3	5	5	3	5	5	3	4	3	4	4	4	5	3
D1. JSCP	5	4	5	4	4	5	5	4	4	4	3	5	3	3	4
D2. Force planning	5	3	5	4	3	4	5	4	3	2	3	5	3	4	3
D3. Support planning	5	3	4	4	3	4	5	3	5	3	3		4	4	3
D4. Dimensional Protection	5	4	4	3	4	5	5	3	4	2	3	5	3	4	3
D5. Transportation	5	4	4	3	4	5	5	3	5	4	3	5	3	4	2
D6. TPFDD	5	4	4	4	4	5	5	3	5	4	4	5	4	3	2
E1. command relationships	5	4	5	4	4	5	5	4	4	4	3	3	4	4	4
E2. Peace operations	5	4	4	4	3	5	5	3	4	4	3	4	5	4	3
E3. Diplomacy	4	4	3	4	3	4	5	3.5	4	3	3	3	4	5	3
E4. Coalitions	5	4	4	4	3	5	5	4	4	3	3	3	4	4	3
E5. Legal	5	3	4	4	4	5	5	3	4	3	3	4	4	4	4
E6. Psy Ops	5	3	4	4	3	4	5	3	3	2	3	4	4	4	3
E7. Regional expertise	4	3	5	4	4	4	5	3	3	2	3	3	3	4	4
E8. Media	4	2	4	4	3	5	5	3	3	2	4	4	4	3	3
F1 Technology	4	4	4	2	4	5	5	3	4	3	3	4	4	5	4
F2. systems	4	4	5	2	3	5	5	4	3	3	3	5	4	4	4
F3. Methods	5	4	5	2	3	4	5	3	3	2	3	4	5	4	3
G1. Event flow	5	5	5	2	4	5	5	5	5	3	3	5	4	5	4
G2. orders	5	5	5	2	4	5	5	5	4	2	4	4	4	4	4

G3. Operational Areas	5	5	5	2	3	4	5	4	3	2	3	4	4	4	3
H1. JTF Types	5	4	5	3	4	5	5	4	4	2	4	4	5	4	4
H2. Functions of DJTFAC	4	4	5	4	3	5	5	4	3	3	4	4	5	4	4
H3. Functions of OP	5	5	5	3	3	5	5	5	4	3	4	4	5	4	4
I1. Execution	5	5	5	3	4	5	5	4	4	2	3	5	4	3	3
I2. communication	4	3	5	2	3	5	5	4	4	1	3	4	4	3	2
J1. Authority	5	5	5	4	4	5	5	3	5	2	3	4	5	4	3
J2. relationships	5	5	5	4	5	5	5	4	5	2	4	4	5	4	4
J3. Liaisons	5	4	5	4	5	3	5	4	3	2	3	4	4	4	4
K1. Types of reports	5	3	4	4	5	5	5	4	4	3	3	3	5	5	3
K2. Readiness reporting	4	3	4	3	5	4	5	4	2	1	3	3	5	4	3
L1. C4IC	5	4	4	4	4	5	5	4	4	2	3	4	3	5	4
L2. MOOTW			3	5	3	5	5	3	3	3	4	4	4	5	3
L3. terrorism			3	5	3	5	5	3	4	3	3	4	3	5	4
L4. the JTF team	4	4	4	4	3	5	5	3	4	3	4	4	5	4	4
L5. coordination	5	5	5	5	3	4	5	3	4	4	3	4	4	5	4
L6. space management	4	4	3	3	3	4	5	4	3	2	3	3	3	4	3
L7. littorals			3	4	3	5	5	4	3	2	3	3	4	4	3
L8. fires	5	5	3	3	3	5	5	4	3	2	3	4	4	4	2
L9. Info Mgmt	5	5	4	4	3	5	5	4	3	3	3	5	5	4	3

	Group 2 Responses																		
Knowledge Areas	a	b	c	d	e	f	g	h	l	j	k	l	m	n	o	p	q	r	s
A1. joint publications	3	4	5	4	3	2	3	3	1	4	1	3	3			3	4	3	2
A2 JPME process	3	5	4	2	4	3	3	2	4	4	4	4	5			4	4	4	4
A3. History	3	4	1	2	4	3	4	4	1	5	1	2	4			4	3	3	3
A4. Principles of war	4.5	4	1		5	3	4	3	3	4	1	2	5			5	3	3	3
A5. Elements	3.5	4	2	3	5	5	4	5	3	3	2	3	4			5	3	4	4
A6. resources	3	4	4	5	4	4	5	4	3	4	1	4	5			2	3	4	3
B1. national security org	4	5	4	2	5	5	5	4	4	4	4	3	5			4	5	4	4
B2. service organization	4	3	5	4	5	4	5	4	4	4	4	3	4	4		4	5	3	4
B3. Joint staff organization	4	5	5	5	4	4	5	4	4	4	3	4	5	3	5	5	4	4	4
B4. Combatant commands	4	5	5	5	4	4	5	4	5	4	3	4	3	3		5	5	5	4
B5. Roles	4		5	4	3	4	4	3	4	4	3	5	5	3		3	5	5	4
C1. JOPES	4	5	4		5	3	3	3	3	4	1	2	5			4	4	4	4
C2. Deliberate Planning	4	4	5	4	5	4	3	3	4	5	1	3	4			5	4	4	3
C3. Deliberate plans	4	4	5	4	5	4	4	3	4	5	5	2	5			5	5	5	3
C4. Crisis Action Planning	4	4	5		5	5	4	3	4	5	2	3	4			5	4	5	4

C5. Service specific planning	4	3	3	3	4	3	3	2	2	4	1	3	3			4	4	5	3
C6. Civil Military Operations	4	3	5	3	4	4	4	4	2	4	3	3	4		5	4	4	5	3
D1. JSCP	4	4	2		4	3	4	3	3	3	3	3	3			4	5	4	3
D2. Force planning	3	4	4		4	3	4	2	3	3	1	3	3			4	5	3	3
D3. Support planning	4	3	4		4	4	4	4	3	4	1	3	4			4	5	4	4
D4. Dimensional Protection	3	3	3		4	3	3	3	2	5	1	2	5			3	4	3	3
D5. Transportation	3	3	5		4	4	4	4	2	5	1	2	5			4	5	4	4
D6. TPFDD	3	3	5		4	3	4	4	3	4	1	2	5			5	5	5	4
E1. command relationships	4	5	5	4	4	4	5	5	4	4	2	4	3	5	5	4	5	4	4
E2. Peace operations	4	4	3	4	3	3	4	4	4	4	1	3	4			4	4	4	3
E3. Diplomacy	4.5	4	2	5	4	5	5	5	2	3	1	2	3			3	3	4	4
E4. Coalitions	4	5	2	4	3	4	5	5	3	5	1	3	5			3	3	4	4
E5. Legal	3	3	2	4	4	4	5	4	2	4	1	2	4			4	3	4	4
E6. Psy Ops	3.5	3	2	4	5	3	5	4	2	4	1	1	3			5	3	4	3
E7. Regional expertise	3.5	3	2	3	5	4	5	5	4	3	1	2	5			5	4	3	3
E8. Media	4.5	2	2	4	5	3	5	5	2	4	3	3	4			4	2	5	3
F1 Technology	5	4	3		4	3	5	5	1	4	4	4	5	5	4	4	4	4	4
F2. systems	5	3	3		3	3	5	5	1	4	4	2	4	4	4	4	3	4	3
F3. Methods	4	4	4		5	2	5	4	2	4	3	2	5	3		5	3	4	3
G1. Event flow	4	5	4		5	4	4	3	4	5	2	3	4			4	3	4	
G2. orders	4	5	4		5	4	3	2	3	5	4	3	4			5	3	4	
G3. Operational Areas	4	5	4		4	3	3	2	3	5	1	2	4			4	3	3	
H1. JTF Types	4	5	5		5	3	4	2	4	5	2	3	5			4	4	3	
H2. Functions of DJTFAC	4	5	4		4	4	4	2	3	5	1	2	4			4	3	4	
H3. Functions of OP	4	5	4		4	3	4	3	4	5	3	3	5			4	3	5	
I1. Execution	4	4	5	4	3	3	4	3	3	4	3	3	5	4		4	3	5	
I2. communication	4	4	5	4	3	3	5	3	1	4	3	2	4	4		3	3	4	
J1. Authority	4.5	5	4	5	4	4	4	5	4	5	4	3	5	4		5	4	4	
J2. relationships	4.5	5	5	5	5	4	4	5	4	5	5	4	4	3		5	5	5	
J3. Liaisons	4.5	5	5	4	4	4	4	4	4	5	4	4	3	5		4	5	5	
K1. Types of reports	3	5	5	4	3	4	4	3	3	4	2	3		5		4	4	4	
K2. Readiness reporting	3	4	5	4	3	3	4	3	2	4	2	3		3		4	5	4	
L1. C4IC	4.5	4	4	5	3	3	5	4	2	4	5	2	4	5		3	4	4	
L2. MOOTW	3	4	5	4	5	4	4	4	3	4	1	2	4			4	3	5	
L3. terrorism	3	3	5		5	4	4	4	2	5	1	4	5			3	3	5	
L4. the JTF team	5	4	5		4	4	5	3	4	4	1	2	4			3	4	4	
L5. coordination	5	4	5	4	4	5	5	4	3	5	1	2	5	3		5	4	4	
L6. space management	2	3	3		3	4	3	4	2	4	1	1	4			4	3	3	
L7. littorals	2	3	2		3	4	3	4	1	4	1	2	5			3	3	4	

L8. fires	4	3	2		3	4	4	3	3	4	1	1	5			3	3	3	
L9. Info Mgmt					3			2		4	3	4	4		4	3	4	

	Group 1	**Group 2**
Knowledge Areas	Avg-ALL	Avg-Sr	Avg-Jr
A1. joint publications	2.90625	2.8	3
A2 JPME process	3.53125	3.333333	3.705882
A3. History	3.03125	3.066667	3
A4. Principles of war	3.403226	3.466667	3.34375
A5. Elements	3.859375	4.066667	3.676471
A6. resources	3.75	3.866667	3.647059
B1. national security organization	4.1875	4.2	4.176471
B2. service organization	4	3.933333	4.055556
B3. Joint staff organization	4.235294	4.2	4.263158
B4. Combatant commands	4.272727	4.266667	4.277778
B5. Roles	4.0625	4.133333	4
C1. JOPES	3.967742	4.333333	3.625
C2. Deliberate Planning	4.125	4.466667	3.823529
C3. Deliberate plans	4.21875	4.2	4.235294
C4. Crisis Action Planning	4.387097	4.666667	4.125
C5. Service specific planning	3.59375	4.066667	3.176471
C6. Civil Military Operations	3.909091	4.066667	3.777778
D1. JSCP	3.774194	4.133333	3.4375
D2. Force planning	3.483871	3.733333	3.25
D3. Support planning	3.733333	3.785714	3.6875
D4. Dimensional Protection	3.451613	3.8	3.125
D5. Transportation	3.806452	3.933333	3.6875
D6. TPFDD	3.903226	4.066667	3.75
E1. command relationships	4.176471	4.133333	4.210526
E2. Peace operations	3.75	4	3.529412
E3. Diplomacy	3.59375	3.7	3.5
E4. Coalitions	3.78125	3.866667	3.705882
E5. Legal	3.625	3.933333	3.352941
E6. Psy Ops	3.421875	3.6	3.264706
E7. Regional expertise	3.578125	3.6	3.558824
E8. Media	3.546875	3.533333	3.558824
F1 Technology	3.939394	3.866667	4

F2. systems	3.69697	3.866667	3.555556
F3. Methods	3.65625	3.666667	3.647059
G1. Event flow	4.1	4.333333	3.866667
G2. orders	4	4.133333	3.866667
G3. Operational Areas	3.533333	3.733333	3.333333
H1. JTF Types	4	4.133333	3.866667
H2. Functions of DJTFAC	3.8	4.066667	3.533333
H3. Functions of OP	4.1	4.266667	3.933333
I1. Execution	3.875	4	3.764706
I2. communication	3.46875	3.466667	3.470588
J1. Authority	4.234375	4.133333	4.323529
J2. relationships	4.484375	4.4	4.558824
J3. Liaisons	4.140625	3.933333	4.323529
K1. Types of reports	3.903226	4.066667	3.75
K2. Readiness reporting	3.516129	3.533333	3.5
L1. C4IC	3.921875	4	3.852941
L2. MOOTW	3.758621	3.846154	3.6875
L3. terrorism	3.785714	3.846154	3.733333
L4. the JTF team	3.866667	4	3.733333
L5. coordination	4.09375	4.2	4
L6. space management	3.166667	3.4	2.933333
L7. littorals	3.214286	3.538462	2.933333
L8. fires	3.366667	3.666667	3.066667
L9. Info Mgmt	3.833333	4.066667	3.444444

Ranking

Knowledge Area	Average
J2. Command relationships [Combatant Command (COCOM), Operational Control (OPCON), Tactical Control (TACON), etc.]	4.484
C4. Crisis Action Planning process (for example, initiation, concept development)	4.387
B4. Combatant commands (for example, missions, unified command plan relationships, command authority)	4.273
B3. Joint staff organization (for example, composition, authority, responsibilities)	4.235
J1. Authority	4.234
C3. Deliberate plans (for example, OPLAN, CONPLAN, functional plan, theater engagement plan)	4.219
B1. Organization for national security (for example, National Command Authorities, National Security Council, DoD, military departments)	4.1875
E1. Organization and command relationships	4.176
J3. Liaison officers and their responsibilities	4.14
C2. Deliberate Planning process	4.125
H3. Functions of a Operations Planning Team (OPT) / Joint Planning Group (JPG)	4.1
L5. Interagency coordination, host nation and multinational coordination	4.093
B5. Roles of the joint staff officer (for example, briefings, papers, staff studies)	4.063
B2. Sister service organization (USAF, USCG, USN, USA, USMC)	4
G2. Types of orders (Warning, Deployment, Execution, etc.)	4
H1. JTF Types	4
C1. Joint Operation Planning and Execution System (JOPES)	3.968
F1 Technology (for example, computer systems, information security, space Systems)	3.939
L1. C4IC (C2 architecture, intelligence systems, etc.)	3.9218
C6. Civil Military Operations planning (for example, relations with non-governmental organizations, private volunteer organizations)	3.909
D6. Time Phased Force Deployment Data (TPFDD) refinement	3.903
K1. JTF reporting responsibilities and types of reports (OPREP, SITREP, etc.)	3.903
I1. Joint Operational Planning and Execution System (Global Command and Control Systems, joint and theater-unique systems, etc.)	3.875
L4. Rapidly building the JTF team	3.866
A5. Elements of national power (for example, diplomatic, economic, etc.)	3.859
L9. Information Management	3.833
D5. Transportation planning (including shortfall identification and feasibility analysis)	3.806
H2. Functions of a Deployable Joint Task Force Augmentation Cell (DJTFAC)	3.8
L3. Combating terrorism	3.785
E4. Coalition considerations (including United Nations issues)	3.781
D1. Joint Strategic Capabilities Plan (JSCP)	3.774
L2. Military operations other than war	3.758
A6. Professional resources (for example, Internet, Joint Universal Lessons Learned, Joint Electronic Library, agency resources)	3.75
E2. Peace operations missions (for example, peacekeeping and peace enforcement)	3.75
D3. Support planning (for example, logistics, medical, civil engineering, and procurement)	3.733

F2. Organization and systems (for example, command and control, networks and grids)	3.696
F3. Methods and elements (for example, deception, electronic warfare, information warfare, and global command and control system)	3.656
E5. Legal concerns (for example, Rules of Engagement and Status Of Forces Agreements)	3.625
C5. Service specific planning systems and adaptive planning	3.594
E3. Diplomacy (for example, political-military considerations and Department of State interaction)	3.593
E7. Regional expertise (for example, culture, language, politics)	3.578
E8. Media relations	3.547
G3. Types of Operational Areas [Joint Operations Areas (JOA), Joint Special Operations Area (JSOA), Joint Rear Area (JRA), etc.]	3.533
A2. Joint Professional Military Education (JPME) process (for example, Phase I, Phase II)	3.531
K2. Readiness reporting	3.516
D2. Force planning (including guard, reserve, and civilian integration)	3.484
I2. Common communication systems (TRITAC, NATO CRONOS, etc)	3.468
D4. Full Dimensional Protection (for example, Weapons of Mass Destruction defense, Theater Missile Defense)	3.451
E6. Psychological Operations and Civil Affairs	3.422
A4. Principles of war (for example, mass, objective, offensive, etc.)	3.403
L8. Coordination of fires	3.366
L7. Major operations in the littorals	3.214
L6. Air space management	3.166
A3. History of joint and multinational operations	3.031
A1. Development and validation of joint publications	2.906

Appendix D

Differences in Survey Results

This appendix contains a comparison between the answers of the more senior officers surveyed and those of the junior officers. The fourth column labeled "Difference" represents the difference in answers between senior officers and junior officers. As can be seen on the following page, two of the largest differences occurred with Joint Operation Planning and Execution System (JOPES) and Joint Strategic Capabilities Plan (JSCP). The senior leaders rated both of these areas as important while the junior officers rated them just as average.

| | | Group 1 | Group 2 | |
Knowledge Areas	Avg-ALL	Avg-Sr	Avg-Jr	Difference
A1. joint publications	2.90625	2.8	3	-0.2
A2 JPME process	3.53125	3.333333	3.705882	-0.37255
A3. History	3.03125	3.066667	3	0.066667
A4. Principles of war	3.403226	3.466667	3.34375	0.122917
A5. Elements	3.859375	4.066667	3.676471	0.390196
A6. resources	3.75	3.866667	3.647059	0.219608
B1. national security organization	4.1875	4.2	4.176471	0.023529
B2. service organization	4	3.933333	4.055556	-0.12222
B3. Joint staff organization	4.235294	4.2	4.263158	-0.06316
B4. Combatant commands	4.272727	4.266667	4.277778	-0.01111
B5. Roles	4.0625	4.133333	4	0.133333
				0
C1. JOPES	3.967742	4.333333	3.625	0.708333
C2. Deliberate Planning	4.125	4.466667	3.823529	0.643137
C3. Deliberate plans	4.21875	4.2	4.235294	-0.03529
C4. Crisis Action Planning	4.387097	4.666667	4.125	0.541667
C5. Service specific planning	3.59375	4.066667	3.176471	0.890196
C6. Civil Military Operations	3.909091	4.066667	3.777778	0.288889
				0
D1. JSCP	3.774194	4.133333	3.4375	0.695833
D2. Force planning	3.483871	3.733333	3.25	0.483333
D3. Support planning	3.733333	3.785714	3.6875	0.098214
D4. Dimensional Protection	3.451613	3.8	3.125	0.675
D5. Transportation	3.806452	3.933333	3.6875	0.245833
D6. TPFDD	3.903226	4.066667	3.75	0.316667
E1. command relationships	4.176471	4.133333	4.210526	-0.07719
E2. Peace operations	3.75	4	3.529412	0.470588
E3. Diplomacy	3.59375	3.7	3.5	0.2
E4. Coalitions	3.78125	3.866667	3.705882	0.160784
E5. Legal	3.625	3.933333	3.352941	0.580392
E6. Psy Ops	3.421875	3.6	3.264706	0.335294
E7. Regional expertise	3.578125	3.6	3.558824	0.041176
E8. Media	3.546875	3.533333	3.558824	-0.02549
F1 Technology	3.939394	3.866667	4	-0.13333
F2. systems	3.69697	3.866667	3.555556	0.311111
F3. Methods	3.65625	3.666667	3.647059	0.019608
G1. Event flow	4.1	4.333333	3.866667	0.466667
G2. orders	4	4.133333	3.866667	0.266667

G3. Operational Areas	3.533333	3.733333	3.333333	0.4
H1. JTF Types	4	4.133333	3.866667	0.266667
H2. Functions of DJTFAC	3.8	4.066667	3.533333	0.533333
H3. Functions of OP	4.1	4.266667	3.933333	0.333333
I1. Execution	3.875	4	3.764706	0.235294
I2. communication	3.46875	3.466667	3.470588	-0.00392
J1. Authority	4.234375	4.133333	4.323529	-0.1902
J2. relationships	4.484375	4.4	4.558824	-0.15882
J3. Liaisons	4.140625	3.933333	4.323529	-0.3902
K1. Types of reports	3.903226	4.066667	3.75	0.316667
K2. Readiness reporting	3.516129	3.533333	3.5	0.033333
L1. C4IC	3.921875	4	3.852941	0.147059
L2. MOOTW	3.758621	3.846154	3.6875	0.158654
L3. terrorism	3.785714	3.846154	3.733333	0.112821
L4. the JTF team	3.866667	4	3.733333	0.266667
L5. coordination	4.09375	4.2	4	0.2
L6. space management	3.166667	3.4	2.933333	0.466667
L7. littorals	3.214286	3.538462	2.933333	0.605128
L8. fires	3.366667	3.666667	3.066667	0.6
L9. Info Mgmt	3.833333	4.066667	3.444444	0.622222

Appendix E

Important Knowledge and Skill Areas

The 19 areas used in the curricula analysis are on the following page. All of these areas, except for the two that are italicized, had an average of four or higher from all of those surveyed. Several officers mentioned in the comments area of the survey that the area italicized were important, thus their inclusion in the analysis.

TOPICS
B. JOINT ORGANIZATION AND STAFF FUNCTIONS
B1. Organization for national security (National Command Authorities, NSC, DoD, military departments)
B2. Sister service organization
B3. Joint staff organization (composition, authority, responsibilities)
B4. Combatant commands (for example, missions, unified command plan relationships, command authority)
B5. Roles of the joint staff officer (briefings, papers, staff studies)
C. JOINT PLANNING PROCESS
C1. Joint Operation Planning and Execution System (JOPES)
C2. Deliberate Planning process
C3. Deliberate plans (for example, OPLAN, CONPLAN, functional plan, theater engagement plan)
C4. Crisis Action Planning process (for example, initiation, concept development)
D. FORCE PLANNING CONSIDERATIONS
D6. Time Phased Force Deployment Data (TPFDD) refinement
E. MULTINATIONAL PLANNING AND OPERATIONS
E1. Organization and command relationships
G. JTF MISSIONS
G1. Event flow during situation development (OPREP-3, Commander's Estimate, etc.)
G2. Types of orders (Warning, Deployment, Execution, etc.)
H. JTF ORGANIZATION
H1. JTF Types
H3. Functions of an Operations Planning Team (OPT) / Joint Planning Group (JPG)
J. JTF COMMAND RELATIONSHIPS (unity of command/unity of effort)
J1. Authority
J2. Command relationships [Combatant Command (COCOM), Operational Control (OPCON), Tactical Control (TACON)]
J3. Liaison officers and their responsibilities
L. JTF STAFF SPECIFIC RESPONSIBILITES AND CHALLENGES
L5. Interagency coordination, host nation and multinational coordination

Appendix F

Curricula Analysis

TOPICS	Army	Navy	Marine Corps	Air Force
B. JOINT ORGANIZATION AND STAFF FUNCTIONS				
B1. Organization for national security (National Command Authorities, NSC, DoD, military departments)		M		
B2. Sister service organization				
B3. Joint staff organization (composition, authority, responsibilities)	M			
B4. Combatant commands (for example, missions, unified command plan relationships, command authority)				
B5. Roles of the joint staff officer (briefings, papers, staff studies)	X			**M**
C. JOINT PLANNING PROCESS				
C1. Joint Operation Planning and Execution System (JOPES)				
C2. Deliberate Planning process				
C3. Deliberate plans (for example, OPLAN, CONPLAN, functional plan, theater engagement plan)				
C4. Crisis Action Planning process (for example, initiation, concept development)				
D. FORCE PLANNING CONSIDERATIONS				
D6. Time Phased Force Deployment Data (TPFDD) refinement	M			**M**
E. MULTINATIONAL PLANNING AND OPERATIONS				
E1. Organization and command relationships				
G. JTF MISSIONS				
G1. Event flow during situation development (OPREP-3, Commander's Estimate, etc.)				
G2. Types of orders (Warning, Deployment, Execution, etc.)	M		M	
H. JTF ORGANIZATION				
H1. JTF Types	M	M	M	
H3. Functions of an Operations Planning Team (OPT) / Joint Planning Group (JPG)	M	M		**M**
J. JTF COMMAND RELATIONSHIPS (unity of command/unity of effort)				
J1. Authority	M(5)		M(5)	
J2. Command relationships [Combatant Command (COCOM), Operational Control (OPCON), Tactical Control (TACON)]		**M(1)**	M(1)	
J3. Liaison officers and their responsibilities	X	**X**	M	**M**
L. JTF STAFF SPECIFIC RESPONSIBILITES AND CHALLENGES				
L5. Interagency coordination, host nation and multinational coordination				**M**

X: No Coverage   M: Marginal coverage   Boldface: Confirmed by graduates
(number): reflects the ranking of this area if in the top five