DEVELOPING QUALFIED LOGISTICS
READINESS OFFICERS (LROs) WITHIN
AIR COMBAT COMMAND (ACC): A DELPHI STUDY

GRADUATE RESEARCH PROJECT

Trace B. Steyaert, Major, USAF

AFIT/ILS/ENS/09C-05

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

The views expressed in this thesis are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the United States Government.

AFIT/ILS/ENS/09C-05

DEVELOPING QUALFIED LOGISTICS
READINESS OFFICERS (LROs) WITHIN
AIR COMBAT COMMAND (ACC): A DELPHI STUDY

GRADUATE RESEARCH PROJECT

Presented to the Faculty

Department of Operational Sciences

Graduate School of Engineering and Management

Air Force Institute of Technology

Air University

Air Education and Training Command

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in Logistics Science

Trace B. Steyaert, MAOM, BS

Major, USAF

June 2009

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

AFIT/ILS/ENS/09C-05

DEVELOPING QUALFIED LOGISTICS
READINESS OFFICERS (LROs) WITHIN
AIR COMBAT COMMAND (ACC): A DELPHI STUDY

Trace B. Steyaert, MAOM, BS
Major, USAF

Approved:

_____//SIGNED//_____   _____
Joseph B. Skipper, Maj, USAF (Advisor)   date

Abstract

After completing the basic technical Logistics Readiness Officer (LRO) course, the LRO returns to their assigned base and begins core competency on-the-job training. In order to become qualified, the LRO must be assigned to at least one proficiency in each of the three core competencies (material management, distribution management, and contingency operations) for and complete all training tasks for each proficiency. The foundation of technical knowledge and skills gained through core competency training will guide the LRO in future assignments to include being an effective operations officer and a squadron commander. However, the current high operations tempo and demand for LROs in support of deployed operations along with the high mission demands at base level are adversely affecting completion of LRO core competency training. Also disrupting the completion of core competency training are the many career broadening opportunities, i.e., executive officer, instructor, 365 day TDYs that often pull the LRO away from core competency training. The objective of this study is to gather expert opinion on LRO core competency training and qualification from a panel of experts, the current operations officers and squadron commanders, who are responsible for managing, training and qualifying LROs. These experts know firsthand the challenges and issues affecting the training progress of LROs. Results from this research will be provided to ACC's Logistics Readiness Division, the study's sponsor, who is responsible for LRO force development.

To my family who sacrificed dearly this past year

Acknowledgements

Table of Contents

List of Figures

List of Tables

DEVELOPING QUALFIED LOGISTICS READINESS OFFICERS (LROs)

WITHIN AIR COMBAT COMMAND (ACC): A DELPHI STUDY

I. Introduction

Overview

In 2002, the Air Force created the combat wing organization. Within this new organization a new squadron formed called the Logistics Readiness Squadron (LRS). Along with the creation of this new squadron, officers from the supply, transportation, and logistics plans career fields merged to create a new officer career field, the Logistics Readiness Officer (LRO).

Approximately seven years have passed since the creation of the LRO and some research has been done on training transfer of LRO technical school graduates (Hobbs, 2005), research of analytical techniques needed for LROs (Main, 2008) and forecasting expeditionary training for company grade officer LROs (Larson, 2008). To date, no research has been conducted that focuses on an Air Force major command's ability to produce qualified LROs. In today's Air Force, LROs have to balance their training progress with many training interruptions, i.e., deployments, special duties, career broadening assignments, wing's high-opstempo. The important question is how are LROs effectively completing their on-the-job (OJT) core competency training and becoming fully qualified?

Aware of the training interruptions affecting LROs, the sponsor for this research, ACC's Logistics Readiness Division, is very interested to investigate the issues surrounding the progress of LRO core competency training. The sponsor identified key

areas of interest in relation to this research topic. The researcher used these key areas to develop the investigative questions and specific Delphi panel questions for this research effort. Results gathered from Delphi study and overall GRP conclusions will be presented to the sponsor who in turn can use the information to benefit future LRO force development. This research effort will specifically address the definition of a qualified LRO, challenges preventing or impeding core competency qualification and the identification of LRO critical functional skills deemed important by the experts in this study.

Background

LRO Specialty and Qualification Matrix

The LRO specialty integrates the spectrum of logistics processes within the operational, acquisition, and wholesale environments (21RX, CFETP, 2002). The major logistics core competencies include distribution management, material management and contingency operations. Specifically, LROs direct and manage these core proficiencies: fuels management, contingency operations, vehicle management, distribution, materiel management and aerial port operations (21RX CFETP, 2002).

After completing the LRO basic course, the LRO normally returns to their assigned base to begin their OJT core competency training. The training objective for the LRO is to get qualified in all three core competencies within two base level assignments, or approximately six years. This goal can only be accomplished if the LRO is available for training, remains focused on training, training resources are available, and if the LRO's training is properly managed by squadron supervision. For example, an LRO could feasibly complete fuels management, and contingency operations in one three-year

assignment then move to another base to continue training and finish distribution management or aerial port operations and be done with all three core competency training requirements. This example assumes the LRO's core competency training is not interrupted and that the resources for core competency training are available at the LRO's current base.

The LRO Career Field Education and Training Plan (CFETP) is the core competency training guide and includes specific functional proficiencies the LRO must complete. Proficiencies for each core competency are identified in Table 1. The material management core competency includes supply and fuels management proficiencies. The distribution core competency includes traffic management, aerial port operations, and vehicle management proficiencies. The contingency operations core competency includes proficiencies related to deployment operations. Award of a special experience identifier (SEI) requires the LRO being assigned for 12 months in a core competency and completion of all core competency training tasks as identified in the CFETP. Upon completion of all three core competencies and certification by the squadron commander, the LRO is considered qualified (21RX CFETP, 2002)

Table 1. Qualification Matrix (21RX CFETP, 2002)

				Years	<2	<4	<6
Competencies	Materiel Management	Distribution	Contingency Operations	Minimum Cumulative Competencies	1	2	3
Must gain one SEI minimum in each competency							
Special Experience Identifiers (SEI) (Proficiencies)	Materiel Management or Fuels Management	Distribution Management or Aerial Port Operations or Vehicle Management	Contingency Operations	Minimum Cumulative SEIs	1	2	3
Note 1: Officer may be deployed after completing and gaining experience in one SEI.							
Note 2: Officer is considered qualified after gaining experience in all competencies.							

LRO Career Path Pyramid

Below is the LRO Career Path Pyramid outlines the various types of assignments an LRO may encounter along their career. Not accounted for on this career pyramid are the numerous deployments for Joint Expeditionary Taskings (JET) or traditional Air Expeditionary Force (AEF) taskings that take LROs away from core competency training for 6 months up to a year. Due to the high-opstempo and demand for the deployed LRO, many LROs supporting these deployment taskings are finding it very difficult to stay on course and complete their core competency training.
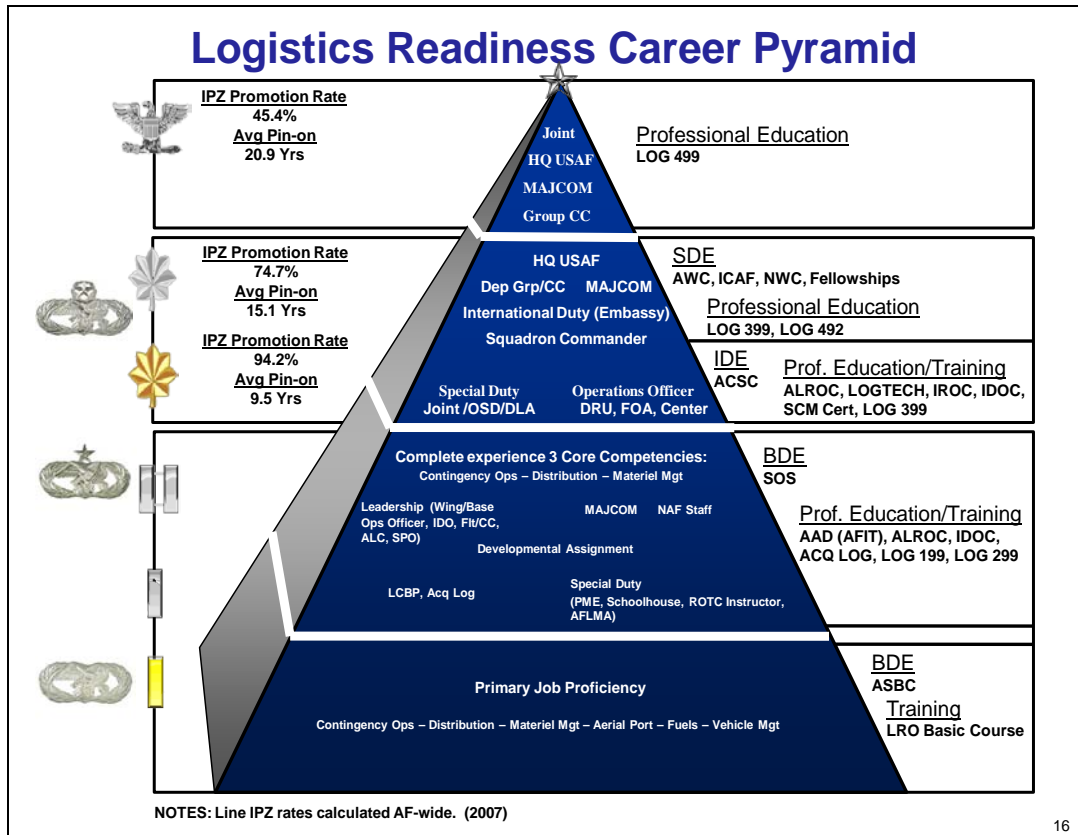
Figure 1: LRO Career Pyramid (McCoy, 2008)

There are concerns that the current Air Force LRO training model outlined in the LRO CFETP fails to address the dynamic and expanding roles that LROs today face (Lovewell, 2007). Although the model equips LROs with the understanding of most basic logistics processes, it falls short to deliver a standardized program from officer to officer. The CFETP elements often cover redundant and outdated information and it does not address all critical areas to the degree the operations tempo requires (Lovewell, 2007). Due to recent changes in mission requirements and organizational re-structuring, the current CFETP appears to be outdated (Lovewell, 2007).

Base-Level Training

Guiding the officer to fulfill their training qualifications is the CFETP (21RX CFETP, 2002). This "roadmap" identifies mandatory and optional skill level training that officers should receive during their career in Logistics Readiness (21RX CFETP, 2002). According to the CFETP, the squadron commander is responsible for certifying the LRO's training. According to the Air Force Program Action Directive (PAD) 08-01, the Logistics Readiness Squadron operations officer is responsible for managing LRO training and ensuring their training progress based on performance of their duties or completion of OJT. Each CFETP training task is assigned a number that correlates to a level of performance, for example, level 1 for identify, level 2 for understand, and level 3 for demonstrate. Depending on how each training program is managed, LROs may be trained by either non-commissioned officers or civilians who are considered technical experts in their specialties. The LRO is required to complete the task in accordance with the established CFETP performance level.

The operations officer is required to meet periodically with the LRO trainee and review their training progress. The operations officer gives credit for accomplished training by initialing specific training tasks in the CFETP. The operations officer can either trust that training was effectively accomplished or the operations officer may consider evaluating the LRO further for their depth of knowledge and competence by asking the LRO questions or giving a written evaluation. No standardized LRO training evaluation exists to measure the level of knowledge gained through OJT for LROs upon completion of core competency training.

Deployed Demand for LROs

LROs have been and are currently in high demand. According to a briefing given

by Major General Gary McCoy in May 2008 on current and future logistics readiness

issues, approximately 78% (215/277) of the LRO deployment requirements were

supporting JETs and the future projection is for LRO JET requirements to increase

(McCoy, 2008).
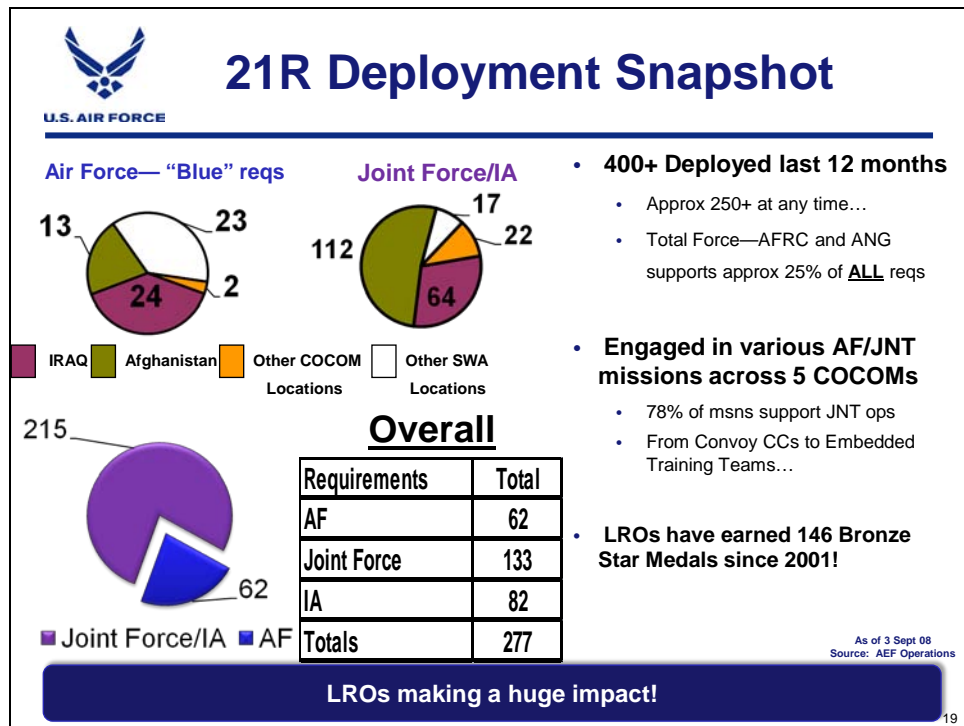
Figure 2: 21R Deployment Snapshot (McCoy, 2008)

Examples of JET requirements would be training Iraqi security personnel on

proper security practices, or operating within a provincial reconstruction team (PRT), or

deploying as a contract specialist officer responsible for quality control of multi-million

dollar support contracts.   PRTs are special military units that provide security and

assistance with reconstruction efforts in unstable nations (Crable, 2007).

Standardized Training

Regardless of the training location, core competency training should be standardized at each base allowing the LRO to receive the same training and in turn receive credit for that training qualification or SEI. Standardization of training supports providing the same level of knowledge and experience for each individual, regardless of location. The mission is not dependant on individual skill sets, but the universal skill sets that every LRO should have. Without standardized training processes, it is difficult to effectively determine the current condition of process or execute sustainable continuous improvement initiatives (Goldsby & Martichenko, 2005). Not surprisingly, each Air Force base provides different training opportunities that either helps to progress LRO qualification or leaves a gap in their training progress. For example, an LRO that is trained in aerial port operations at Base A should be similar in qualification as an LRO trained in aerial port operations at Base B. Both LROs are using the CFETP as a standardized training template, and therefore should accomplish the same training tasks for the same credit. This is not, however, always the case. A simple example can be found in aerial port operations training when Base A belongs to ACC where only air terminals exist. Air terminals are very small versions of aerial ports and have limited capabilities. Whereas, Base B is within Air Mobility Command (AMC) and has a fully-capable aerial port. Most ACC air terminals do not have the robust capabilities and the wide array of training opportunities that AMC aerial ports provide. The question is should LROs trained within ACC receive the same aerial port qualification credit as those LROs trained at AMC bases when the level of training opportunities are not the same?

Training Challenges

Some of the challenges to completing LRO training in a timely manner are the interruptions or special/additional duty assignments that pull the officer away from training. In the LRO career path, officers have the option to volunteer for a special duty or career broadening program after their first assignment (21RX CFETP, 2002). While providing a different perspective to many officers, these special duty assignments often eliminate, or drastically reduce, opportunities to continue training. Examples of special duty assignments include being an instructor, executive officer, attending selective schools like Air Force Institute of Technology or selective programs like the Air Force Intern Program or the Logistics Career Broadening Program (21RX CFETP, 2002).

Another major training obstacle for LROs are the numerous deployments that LROs are currently supporting. As of the writing of this graduate research project, LROs have a 1 to 2 deployment dwell ratio. That means an LRO deploys for at least 6 months, returns for 12 months and deploys again for 6 months. For example, a second lieutenant LRO with one core competency completed and currently in core competency training can anticipate deploying for at least half of the time of their first assignment. A higher deployment rate, such as a 1 to 1 deployment dwell ratio, may exacerbate the problem.

Problem Statement

With the current high ops tempo and many training interruptions, LROs are facing a distinct disadvantage in completing their OJT core competency training and in turn becoming fully qualified. Does the current LRO core competency training program produce qualified LROs or have LROs been generalized too much and adversely impacted their expertise levels?

Research Objectives and Investigative Questions

The research objectives are to first identify the expert's perceived definition of a "qualified" LRO. Next is to identify the circumstances that are impeding LRO core competency training. Finally, to ensure the current training includes the required critical training skills needed of the modern day LRO. Research accomplished for this graduate research project focused on these investigative questions:

Question 1:

What is your definition of a "qualified" LRO?

The basis for this question came from inputs received from ACC functional managers who all shared the same frustrations about LROs not becoming qualified due to the many distractions and interruptions preventing training qualification. In addition, the LRO CFETP defines a qualified LRO as having spent 12 months in each of the three core competencies and attained a proficiency in each core competency of materiel management, distribution, and contingency ops. Research results from this question will confirm the expert panel's definition of a qualified LRO.

Question 2:

What challenges prevent, or impede, LRO's from completing core competency training?

Along the same vein as the previous question, the ACC LRO functional managers identified the distractions or interruptions they believe are hindering LRO training progress. The aim of this question is to identify from the field of experts their opinion for why LROs are not completing core competency training.

Question 3:

List the critical functional skills you believe are required for an LRO to be considered "qualified"?

The question on LRO critical functional skills is an attempt to provide ACC and Air Staff a validity check on whether the current and future CFETP is focused on the necessary critical functional skills required of a qualified LRO per the expert opinion of commanders and operations officers responsible for training LROs.

Research Focus

Research for this study focuses on squadron commanders and operations officers within ACC who are responsible for managing and certifying qualified LROs. The sponsor for this research is ACC's Logistics Readiness Division at Langley AFB, Virginia who is responsible for LRO force development within ACC.

Research Design

Figure 3 presents how this study began with an inquiry to ACC's Logistics Readiness Division about issues affecting LRO core competency training. The study then surveyed the experts responsible for LRO OJT core competency training regarding the issues presented by ACC for a consensus regarding the importance of the identified issues.
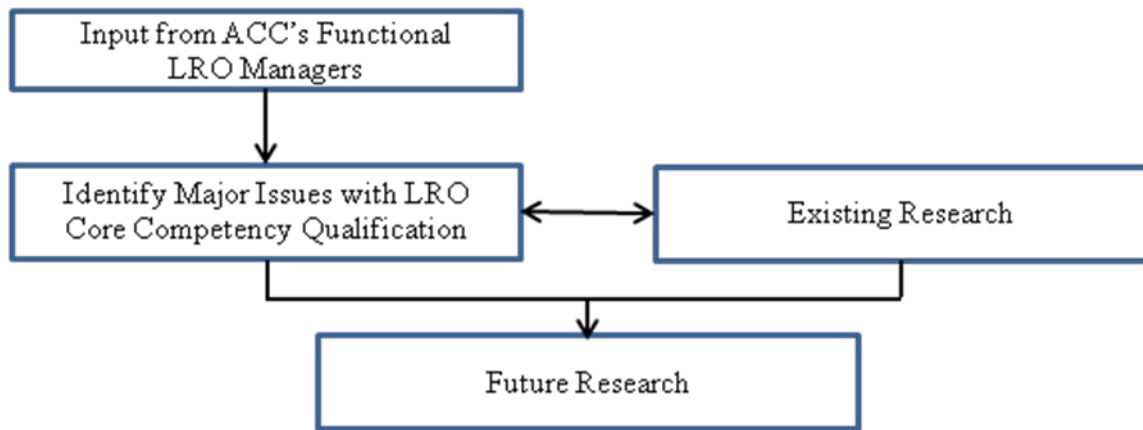
Figure 3: Study description.

Research Methodology

This study relies on the expert opinions of those operations officers and squadron commander's managing LRO core competency training. Due to the qualitative nature of this study, a modified Delphi approach was selected as the most appropriate means of gaining expert insight into the issues and challenges impeding LRO core competency training.

Summary

Eight years ago, a new supply, transportation or logistics plans officer could spend at least three years at base level learning their specialty to become technically competent in their functional profession. Much has changed since then, now the three career fields are one and the LRO is expected to learn the same level of technical knowledge in much shorter time. To add difficulty in accomplishing this goal, the LRO is in high demand both deployed and at home base. Interruptions in core competency training, i.e., deployments, are taking their toll on the LRO's ability to start and finish their core competency training and become fully qualified.

The following chapter will review literature discussing the factors that affect

training, the importance of effective training transfer, and evaluation of training to ensure

the trainee has the required technical knowledge following training.

II. Literature Review

Overview

       This chapter provides a literature review of factors affecting effectiveness of training and discusses the importance of having the knowledge transferred to the trainee along with the evaluation to confirm the training was successful.

Factors Affecting Transfer of Training

       Military training can be very mundane, especially when the trainer is not motivated to train or the trainees are not motivated to learn. This may be due to the fact the military is always training and the potential exists for trainees to tune out the training because it may be boring or the training is redundant. Employees who attend a training program because they want to learn will profit more from the learning experience (Hicks & Klimoski, 1987). The LRO in training must understand the operational connection to their training or the impact. By seeing the operational connection or impact to the duties they perform, the LRO may be more motivated to really learn what is taught.

       To help with understanding the importance of learning and what has been taught, supervisors can convey to trainees the important connection between training and the operational application of that training before training is provided. Along with discussing the positive attributes of successful training, the supervisor should discuss the negative consequences of not learning what has been taught. Support from supervisors has also been found to affect pre-training motivation (Baldwin & Ford, 1988; Wexley & Baldwin, 1986). Trainees in training may be more inclined to learn if they know how important it is to learn and how their learning connects to successful mission accomplishment.

Trainees who lack support from their supervisors are less motivated to attend and learn from training (Baldwin & Ford, 1988; Wexley & Baldwin, 1986). Facteau et al. (1995) and associates promote the concept that support comes from different sources such as supervisors and subordinates as well as reinforcing the idea that different sources can provide different influences.

Goals promote effort and persistence at task performance (Gist, Bavetta, Stevens, 1990). Operations officers or training managers can set training goals for LROs to achieve on a monthly basis. For example, an LRO should average completing 10 training tasks per month to stay on course for completing 120 tasks for 12 months of training.

Effective Training Transfer

Training transfer is the ability to apply what has been learned from training back to one's job (Hobbs, 2005). For example, a training requirement for an LRO learning contingency operations competencies may be to demonstrate how to build a unit line number into time phase force deployment data (TPFDD). The CFETP would identify this training task as a performance level three, or "demonstrate". The trainer would provide the education and training on how to build a unit line number. The LRO would then demonstrate for the trainer how to access the Joint Operations Planning and Execution System (JOPES), pull up the JOPES Editing Tool (JET) module and build the unit line number. One factor that can affect the transfer of technical skills to the job is the extent to which the trainee is given the opportunity to perform trained tasks on the job. (Ford, Quinones, Sego, & Sorra, 1992). In this example the LRO was provided the training and then the tools to demonstrate or perform the trained task. By successfully

demonstrating this task the LRO has effectively transferred knowledge gained in training to the operational task.

LRO Training Evaluation Issue

The cost of inadequate training manifests itself in the amount of time logistics officers spend learning on the job at deployed locations instead of arriving in the AOR fully prepared to perform their duties (Hall, 2003). Because of the necessary need to have LROs educated and trained before they deploy, trainers and evaluators need to ensure the Air Force's LROs are prepared and this can be accomplished through effective evaluation systems. By evaluating the LRO on their competencies before they deploy, the trainer and the operations officer can ensure the LRO is proficient or identify their lacking skills. When the deployment tasking for a fuels officer comes down to the squadron commander, he or she needs to feel confident they are selecting the right officer with the required knowledge and skills to accomplish the mission and not be doubtful whether the officer filling the tasking is competent to perform the duties required. More importantly, the deployed commander expects to receive an LRO ready to hit the ground running, ready to assume responsibilities, and not need extra time at the deployed location to get spun up on their duties.

Training often is treated as a "check-in-the-box" procedure, and students are evaluated only to the degree to which they complete the training. (Salas, et al, 2003). Rather than learn the training task to the performance level of understanding required by the CFETP, the officer may be inclined to speed through the training and get the "check-in-the-box" for those training tasks in a race to get qualified. Without an evaluation tool in place, the operations officer is unable to truly confirm if training was accomplished to

the required performance level and if the LRO gained the required knowledge.   Without

that final confirmation, leadership assumes the risk of deploying an LRO who may not be

able to perform their deployed mission due to lack of knowledge and experience in that

core competency.

In order to evaluate whether the LRO has learned what was taught, the operations

officer should establish their own competency evaluation to ensure the LRO has the

required knowledge for a particular functional area. For trained skills to transfer, training

material must be learned and retained (Kirkpatrick, 1976). A booster session is an

extension of training and usually involves a periodic face-to-face contact of a planned or

unplanned nature between the trainer and trainee (Baldwin, 1988). The operations officer

can also provide a similar booster session to the LRO in training by quizzing the LRO on

required knowledge and skills to perform their duties. This kind of session verification

may be accomplished during the monthly or quarterly training review sessions between

the LRO and the operations officer. If for some reason the booster session confirms the

LRO is not knowledgeable of the functional area or tasks, the operations officer can order

the LRO to retrain on those tasks and withhold giving qualification credit until

knowledge and competence can be effectively demonstrated. If necessary, verbal

counseling's and possibly the use of non-judicial administrative punishment in the form

of a letter of counseling, letter of admonishment or letter of reprimand can be employed

to get the LRO's attention and back on course. Ultimately, it is the responsibility of the

LRO to stay on top of his or her training and to keep the operations officer informed of

any issues preventing forward training progress.

The purpose of training evaluation is to determine if desired changes in behavior have occurred (Blumenfeld and Holland, 1971). Operations officers in charge of training should use a standardized system of measuring or evaluating if the LRO has learned the tasks to the required performance level. Having a standardized evaluation system would help to identify the proficiency and competence of each LRO in training.

III. Methodology

Overview

The purpose of this chapter is to describe the methodology used in this research. This research project utilizes Delphi methodology to provide answers to the three primary research questions. The Delphi process is sequential in order and relies on the previous round to prepare for the next round until a consensus among the expert panel is reached (Brown, 1968).

Methodology

Procedures

The focus of this research is to examine the LRO core competency training at each logistics readiness squadron in ACC and determine how effectively qualified LROs are being developed. The majority of data needed to complete this research resides with the squadron commanders and operations officers who are responsible for core competency training at base level and ultimately responsible for developing qualified LROs.

Delphi Characteristics

Because of the unique characteristics identified in Table 2, the Delphi method is applicable for multi-dimensional research questions that deal with uncertainty in a domain of imperfect knowledge (Churchman & Schainblatt, 1965).

Table 2. Characteristics of the Delphi Method   (Adapted from Cegielski, 2007)

Characteristic	Description
Anonymity	By interacting only with the administrator, the panelists remain anonymous to one another.
Controlled feedback	Information is gathered and redistributed via the administrator.
Group response	Individuals contribute information to form a group response.
Expert opinion	Panelists are selected based on knowledge of the topic.
Reduced cost/time	There is no need to arrange costly and time-consuming face-to face meetings.

The objective of the Delphi technique is to achieve consensus among experts regarding a specific topic (Okoli & Pawlowski, 2004; Taylor & Meinhardt, 1985). When compared to survey methodology, the Delphi technique has repeatedly achieved a greater level of accuracy than other group consensus techniques (Cegielski, 2007).

Delphi technique can be used to help identify critical issues or needs affecting an organization or a process. For example, Brancheau and Wetherbe (1987) used a Delphi technique to identify the most critical issues facing information system executives and a recent Delphi study by Martin and Chaney was used to identify key topics and subtopics needed for a college curriculum in intercultural business communication (Larson, 2008).

Delphi Process for This Study

The Delphi method is a name that has been applied to a technique used for the elicitation of opinions with the object of obtaining a group response of a panel of experts. Delphi replaces direct confrontation and debate by a carefully planned, orderly program of sequential individual interrogations usually conducted by questionnaires (Brown, 1968). The series of questionnaires is interspersed with feedback derived from the respondents. Respondents are also asked to give reasons for their expressed opinions and these reasons are subjected to a critique by fellow respondents. The technique puts

emphasis on informed judgment (Brown, 1968). It attempts to improve the panel or committee approach by subjecting the views of individual experts to each other's criticism in ways that avoid face to face confrontation and provide anonymity of opinion and of arguments advanced in defense of those opinions (Brown, 1968).

Operationally, the application of the Delphi method involves three phases: 1) study preparation, 2) the collection of topic relevant issues via Delphi rounds, and 3) the identification and ranking of reported issues (Cegielski, 2007). Figure 4 outlines the details of the three phases for which this study follows.
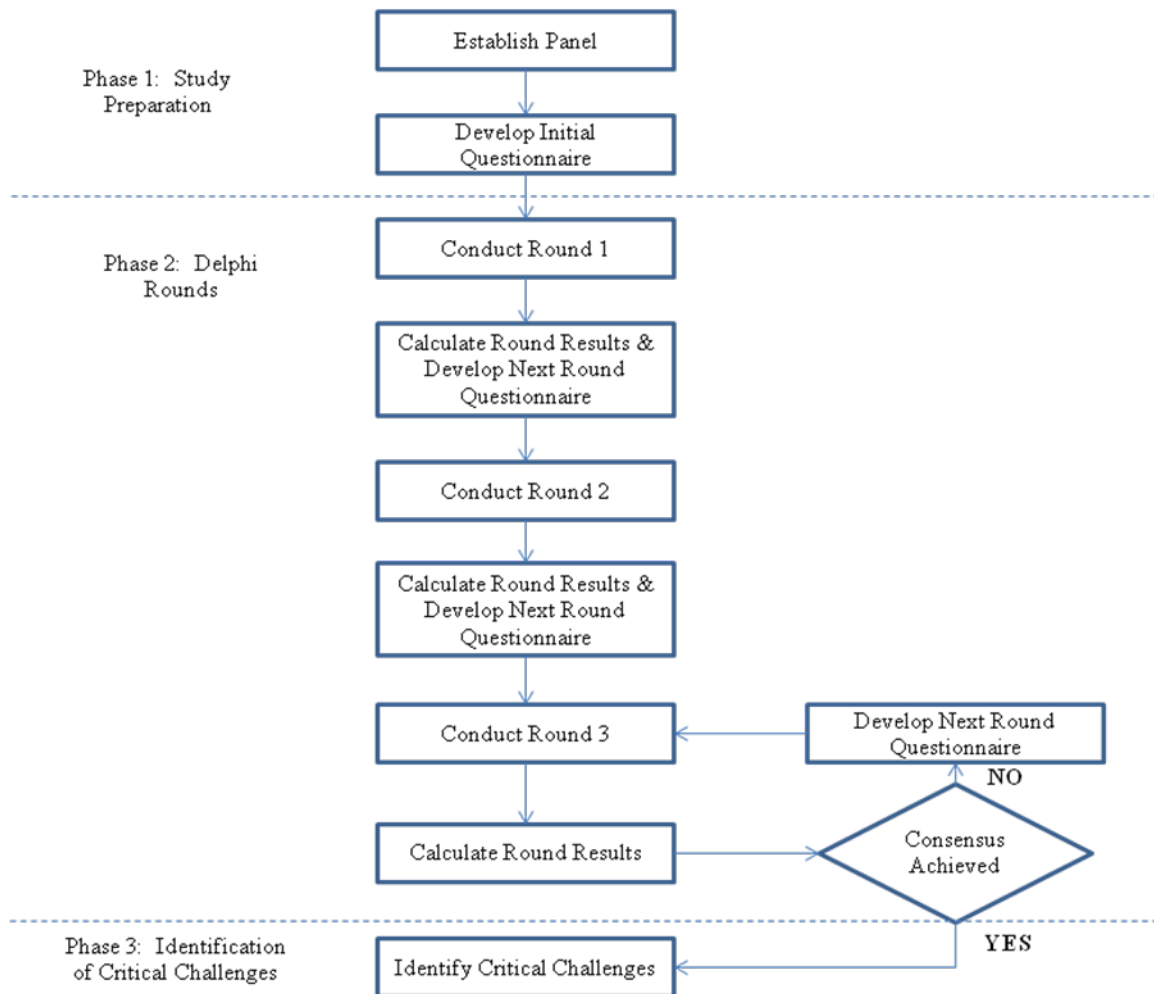
Figure 4: Overview of research methodology (Boone, 2006)

Phase 1. The first phase consisted of two key steps: establishment of the expert panel and development of the initial questionnaire.

Selection of Expert Panel

The first step in the Delphi process requires identification and solicitation of panel members with the necessary knowledge and background to address the issues of interest (Malhotra, et al., 1994). Studies have found little is gained from extremely large panels (Dalkey & Helmer, 1963). The best performance of panels normally comes from groups with at least ten members (Brockhoff, 1975). Each panel member has different experiences that lend multiple, unique inputs to the issue and the input is given and kept in confidence allowing panel members to freely express themselves (Linstone & Turnoff, 1975).

The four criteria to use as a guide when selecting a panel of experts for a Delphi study include (Terstine & Riggs, 1976):

1. Must have enough basic knowledge of the problem to apply it
2. Must be able to be objective and rational
3. Must have time to participate and be willing to make a commitment
4. Knowledge composition, whether technical or more multi-subject insight is needed

When the study is education related, the panel of experts should represent the targeted population and have credible experience in the organization (Olshfski & Joseph, 1991). For the purpose of this study, the qualifiers for this expert panel are the officers directly responsible for LRO core competency training at base level. Squadron commanders and their operations officers are normally the senior LROs at each base and are mandated by Air Force instruction to oversee and manage the LRO training program using the LRO CFETP as their training guide (2002 LRO CFETP).

To initiate this research study, the research sponsor, ACC/A4R, drafted a letter requesting support from all ACC squadron commanders and operations officers. Table 3 identifies the expert panel member composition by rank, average years of service, and average years of managing LRO training for the study.

Table 3. Panel Member Composition

Position	Captain	Major	Lieutenant Colonel	Avg Yrs of Svc	Avg Yrs Managing LRO Training
SQ/CC			15	19	3
OPSO	4	10	1	14	1

Initial Questionnaire

Using inputs from the sponsor, the researcher generated demographic/background questions and three open ended questions related to core competency training and qualification to be used in the first round. Before sending the first round questionnaire out to the field, the questionnaire was sent to a small review panel of experienced field grade LROs to gain their inputs and critiques. Those critiques were used to help clarify and finalize the questions for the first round.

The purpose of the first round questionnaire is to aggregate information for future ranking rounds of the study (Brancheau & Wetherbe, 1987). In the first round, the panel of experts contributes inputs that they feel are pertinent to the focus question of the study (Nambisan, Agarwal, & Tanniru, 1999). Once the initial questionnaire is ready to send out, it can be delivered via paper copy or by email attachment over the internet. The number and speed of survey responses sent electronically is favored over using the mail approach (Griffis, Goldsby, & Cooper, 2003). If a questionnaire needs to be resent

electronically to a respondent, it can be easily resent in a matter of seconds versus waiting a much longer period to receive a paper copy.

    Phase 2. The second phase is the collection of topic-relevant issues via Delphi survey questionnaires and begins with sending the first round questionnaire to the panel of experts. The relevant issues identified by the field of experts are then used to develop the second Delphi round for rank-ordering of the issues.

    In the second Delphi round, the respondents rank each of the issues from the first round (Paliwoda, 1983). Using the data gathered from the field in the second round, the researcher scores the issues using a weighted average method and redistributes the results to the expert panel (Nambisan & Agarwal, 1999). In the third round, and any other required rounds, the experts review the group rankings and continue to re-rank the issues given of the aggregated responses of the group (Cegielski, 2007). This process of ranking and re-ranking continues until the panel achieves a consensus (Brown, 1968). The number of rounds required to reach a consensus may vary from two to four (Marino, 1983), however, the number of rounds needs to be as few as possible, to avoid panel fatigue and attrition (Mitchell, 1991).

    Phase 3. In the third phase, the researcher has completed the final content analysis and rank-ordered the reported issues from the field to arrive at a consensus. A consensus can be achieved either graphically (Ogden, Peterson, Carter, & Monczka, 2005) or statistically (Schmidt, 1997; Schmidt, et al, 2001). A consensus among experts brings validity to the research rather than relying on the judgment of a single specialist (Brown, 1968). Judgment and informed opinion have always played a crucial role in human enterprises. Expert judgment can be incorporated into the structure of an

investigation and can be made subject to some of the safeguards that are commonly used to assure objectivity in any scientific inquiry (Brown, 1968).

Data Collection

The Delphi study began with the development the Delphi panel and the identification of the initial set of issues. The sponsor for this research provided concerns and issues related to the topic of LRO training and qualification that were used to develop and pilot test the initial questionnaire.

For the first round, the researcher sent an email describing the research topic and sponsor support to 15 squadron commanders and 15 operations officers and solicited their support for participating in this Delphi study. The first round questionnaire (Appendix A) had demographic/background questions and three Delphi questions (Table 4). Respondents were given 14 days to reply with their completed questionnaires. Twenty-seven out of 30 respondents responded for a 90% response rate.

Table 4. First Round Delphi Questions

1.	In your opinion, what is your definition of a "qualified" LRO?
2.	In your opinion, what are the challenges impeding progress of LRO core competency training?
3.	In your opinion, what are the critical functional skills required of a "qualified" LRO?

In order to identify redundancy in the responses received from the expert panel, the researcher created a three-member committee of experienced field grade officers familiar with Delphi research methodology to review the submitted comments. To maintain a high level of inter-rater reliability, each of the committee members individually reviewed all of the contributed comments and subsequently classified them into their own respective categories (Krippendorff, 2004). Upon completing their

individual classifications, the committee emailed the primary researcher their respective

comment classifications. Committee settled on a comment classification schema that was

used to create the questionnaire for round two. Table 5 has the top ten responses (not

rank-ordered) from the expert panel for each of the three Delphi questions. These top ten

responses per question were then emailed out (Appendix B) to the expert panel for them

to rank-order the responses from 1 (strongest) to 10 (weakest).

Table 5. Second Round Top Ten Responses per Delphi Question (not rank-ordered)

Question 1: In your opinion, what is your definition of a "qualified" LRO?	
	Competent understanding and knowledge of the LRO core competencies, completed all CFETP training tasks and has all special experience identifiers (SEIs)
	Proficient understanding and knowledge of base level logistics functions (LRS or APS) and their interrelationships
	Understanding of AF supply chain management and doctrine
	Demonstrates good communication/managerial skills, is an adaptive plus independent worker and is accountable
	Deep understanding and knowledge of strategic level logistics functions
	Received AFIT logistics management degree, training certifications (i.e. supply chain management), career broadening (i.e., acquisitions, LCBP)
	Deployed at least twice for 120 days each deployment
	Knows when and how to ask questions and get needed answers
	An officer that can lead as a flight commander with little supervision
	Experience with and conversant knowledge in Joint and AF logistics
Question 2: In your opinion, what are the challenges impeding progress of LRO core competency training?	
	Deployments
	Exercises and inspections
	New assignments and assignment duration
	Availability of time due to high homestation opstempo (wing and squadron mission)
	Lack of leadership involvement
	Additional duties
	Family responsibilities and issues
	Outsourcing former LRO duties and converting LRO position to civilian
	Manpower shortages and lack of qualified trainers
	Constant shuffling of LROs to fill key vacant LRO positions
Question 3: In your opinion, what are the critical functional skills required of a "qualified" LRO?	
	IDO experience, deployment operations, TPFDD management, support planning (IGESP/beddown)
	Briefing and analytical skills
	Supply management, WRM management, warehouse management, HAZMAT
	Understands logistics information systems (SBSS, DCAPES, GDSS, GATES, LOGMOD, OLVIMS, etc…)
	Manage squadron ART and SORTs programs
	Vehicle management and vehicle operations (including convoy operations)
	Fuels management
	Aerial port operations, cargo movement, load planning, TMO
	Administrative experience (awards, decorations, performance reports, budget, discipline issues, enlisted promotion system)
	Leadership

Respondents were given seven days to reply with their rank-ordered responses. Second round yielded 17 respondents returning their completed rank-ordered surveys for a 63% response rate. After receiving the second round responses, the researcher used statistical software called Megastat to compute the level of consensus using Kendall's coefficient of concordance (W). An agreeable consensus was not achieved following the second round in which the first question's W = .472, second question's W = .485, and the third question's W = .359 which prompted the need for a third round. Second round rank-ordering was weighted and averaged to determine the respondent's overall rank-order of responses for each question. This rank-order was then emailed (Appendix C) to the respondents for the third round. Study participants were asked to confirm if they agreed to the rank-order and if not to re-rank-order the responses. Respondents were given only four days to respond to the second round and only 14 respondents of the previous 17 respondents returned their surveys for an 82% response rate. Again using the Megastat statistical software, the researcher computed the responses and each question yielded a coefficient score greater than 0.8 for all three Delphi questions.

Following the third round, the study concluded as a sufficient level of consensus was reached regarding the definition of a qualified LRO, issues preventing LROs from getting qualified, and what are the critical functional skills of a qualified LRO. Table 6 shows the final consensus in rank-order following the third round.

Table 6. Third Round Rank-Ordered Consensus

	Question 1: In your opinion, what is your definition of a "qualified" LRO?
1	Competent understanding and knowledge of the LRO core competencies, completed all CFETP training tasks and has all special experience identifiers (SEIs)
2	Proficient understanding and knowledge of base level logistics functions (LRS or APS) and their interrelationships
3	Understanding of AF supply chain management and doctrine
4	Demonstrates good communication/managerial skills, is an adaptive plus independent worker and is accountable
5	Experience with and conversant knowledge in Joint and AF logistics
6	An officer that can lead as a flight commander with little supervision
7	Deep understanding and knowledge of strategic level logistics functions
8	Knows when and how to ask questions and get needed answers
9	Received AFIT logistics management degree, training certifications (i.e. supply chain management), career broadening (i.e., acquisitions, LCBP)
10	Deployed at least twice for 120 days each deployment
	Question 2: In your opinion, what are the challenges impeding progress of LRO core competency training?
1	Deployments
2	Constant shuffling of LROs to fill key vacant LRO positions
3	Availability of time due to high homestation opstempo (wing and squadron mission)
4	Exercises and inspections
5	Lack of leadership involvement
6	Manpower shortages and lack of qualified trainers
7	Additional duties
8	New assignments and assignment duration
9	Outsourcing former LRO duties and converting LRO position to civilian
10	Family responsibilities and issues
	Question 3: In your opinion, what are the critical functional skills required of a "qualified" LRO?
1	IDO experience, deployment operations, TPFDD management, support planning (IGESP/beddown)
2	Leadership
3	Supply management, WRM management, warehouse management, HAZMAT
4	Briefing and analytical skills
5	Aerial port operations, cargo movement, load planning, TMO
6	Fuels management
7	Understands logistics information systems (SBSS, DCAPES, GDSS, GATES, LOGMOD, OLVIMS, etc…)
8	Vehicle management and vehicle operations (including convoy operations)
9	Manage squadron ART and SORTS programs
10	Administrative experience (awards, decorations, performance reports, budget, discipline issues, enlisted promotion system)

IV. Results and Analysis

Overview

This chapter defines the use of Kendall's W to measure the level of consensus and explains the results and analysis beginning with round two and subsequent analysis in round three leading to consensus.

Measuring Consensus

Kendall's W provides a coefficient of agreement among raters (Kendall & Gibbons, 1990). It is a nonparametric statistic and can be used for assessing agreement among raters. With this statistic it is possible to measure consensus as well as strength and change (Schmidt, 1977). A coefficient of 0.1 indicates a very weak agreement, whereas a coefficient of 0.7 is a very strong agreement (Schmidt, 1997). A significant W indicates that the participants applied essentially the same standard in judging the importance of the issues and they are in consensus (Huscroft, 2008). The formula to compute W is:

$$W = \frac{S}{\frac{1}{12}k^2\left(n^3 - n\right)}$$

In this expression, s is sum of squares of the observed deviations from the mean R_j, k is number of sets of the rankings, n is number of issues ranked, and $\frac{1}{12}k^2\left(n^3 - n\right)$ is the maximum possible sum of squared deviations, i.e., the sum s that would occur with perfect agreement among k rankings (Huscroft, 2008).

Utilizing Megastat statistical software for round two of the Delphi study produced a W = .472 and a p-value of 5.51E-12 for the first question. Second question's W = .485 and a p-value of 2.20E-12. Third question's W = .359 and had a p-value of 1.23E-08.

The third round yielded more significant results than the second round. The third round's first question results produced a W = .837 and a p-value of 1.21E-18. The second question results produced a W=.905 and a p-value of 2.18E-20. The third question results produced a W= .888 and a p-value of 6.04E-20, all statistically significant. Kendall's W values of 0.81 – 1.00 are considered to represent almost perfect agreement (Landis & Koch, 1977). With the significance of the Kendall's W measures of consensus, the researcher concluded that the panel had reached a consensus. As a result, no additional Delphi rounds were needed.

The objectives of this research study were to define a qualified LRO, identify the main issues preventing LRO core competency training and confirm the critical functional skills required of a qualified LRO. Round three confirmed the results of this study with the expert panel being in very strong agreement with the rank-order of responses for all three questions.

V. Discussion and Recommendations

Overview

This chapter will discuss in more detail the timeliness and significance, assumptions and limitations, findings, significant expert panel feedback, importance of integrated knowledge, recommendations for future research, and end with a summary of this research effort.

Timeliness and Significance of this Research

The CSAF has tasked AF/A4L and AF/A4LF to define what a logistics officer looks like today and for the future. In turn, AF/A4LF has tasked all major command Logistics Readiness Divisions, responsible for LRO force development to define what LROs should look like today and in the future (Bendall, 2009b). The main concern of Air Force leadership is if LROs have been generalized too much and as a result adversely affected their expertise levels. Additionally, a new Air Force LRO CFETP is currently being coordinated with a forecasted debut in October 2009. The firsthand feedback given from the field of experts used in this study to determine the current issues of LRO core competency training and qualification will be beneficial to the functional force development managers and authors of the LRO CFETP charged with establishing the standards and expectations for LRO functional core competency knowledge.

Before leaving the Air Force Logistics Readiness Directorate, the Air Force's lead LRO, Major General McCoy (2008), identified in the Air Force Logistics Readiness Strategic Plan technical training for the LROs as a priority. The timeliness of this research and the information gained will provide important and useful information to be utilized for future LRO force development and in the creation of the new CFETP.

Emphasis on Training

The Air Force Directorate of Logistics Readiness published a 2008 A4R Strategic

Plan that sets the future training direction for LROs:

> *We will develop and implement a force development strategy to ensure officers*
> *have the fundamental skills they need and receive the training, education and*
> *experience needed to meet current and future challenges. We will target*
> *education to expand capabilities with a goal of getting the right education at the*
> *right time to the right person. We will vector assignments to personalize officer*
> *development—the right assignment at the right time will capitalize on education*
> *and training and further develop the officers' competencies.*

With this strategic vector on training, LRO force development can expect new

emphasis on training. The expectation for the new CFETP is that it will capture new

training requirements based from experience and lessons learned from the field that better

prepare LROs for current and future deployed demands. Some of the new changes

currently being forecasted for the new CFETP are (Bendall, 2009):

1. OJT criteria will change from completion of all three core competencies to

completion of one core competency; however, the experience criteria for award of

AFSC 21R3 will be set at no less than 24 months time in AFSC.

2. The number of SEIs will be reduced from six to two (Aerial Port Ops and

Fuels) and award criteria for these SEIs will be more stringent than they are now.

Assumptions/Limitations

Possible assumptions or limitations that may impact this research are the

availability of the ACC Logistics Readiness squadron commanders and operations

officers. The researcher may discover many of the respondents are deployed or not

accessible to provide a response. As with any survey methodology, the opinions of panel

members may be biased. Additionally, there may be differences across other major

commands due to differences in missions, organizational structure, and availability of resources to support LRO training. Other biases may include the respondents not willing to convey their true opinions because of the official sponsor being Air Combat Command's Logistics Readiness Division or fear of going against current Air Force instructions or guidelines, even though all survey respondents were promised anonymity. Also, even though respondents were specifically asked to respond to the Delphi questions without referencing the CFETP, many respondents quoted the document. It is not clear if their responses reflect their true opinions or the "book answers".

Defining a Qualified LRO

After three rounds of surveys, the panel of experts agreed that the best definition of a qualified LRO is one who has a competent understanding and knowledge of the three core competencies (material management, distribution management, and contingency operations), has completed all required CFETP training tasks and has all SEIs.   The second best definition was a proficient understanding and knowledge of base level logistics functions, Logistics Readiness Squadron or Aerial Port Squadron, and their interrelationships.   Per the new guidance on LRO qualification, in order for an LRO to remain qualified and to retain the 21R3 AFSC, the LRO must complete all three core competencies and all six proficiencies (aerial port ops, contingency ops, distribution, fuels, materiel management and vehicle management) within seven years (AFOCD, 2007). Achieving this level of knowledge and experience within in seven years given the high opstempo of deployments and the mission at homestation plus the career broadening opportunities will make this accomplishment extremely challenging for LROs.

Completing LRO Core Competency Training

The panel of experts concluded that the current deployment commitment was the largest factor impeding the LRO's ability to complete their core competency training and achieving qualified status. Deployed commanders value the skill sets, leadership and experience the LRO brings to the fight. Figure 5 depicts deployment taskings on the rise for LROs and the forecasted trend is for it to continue rising (Bendall, 2009).
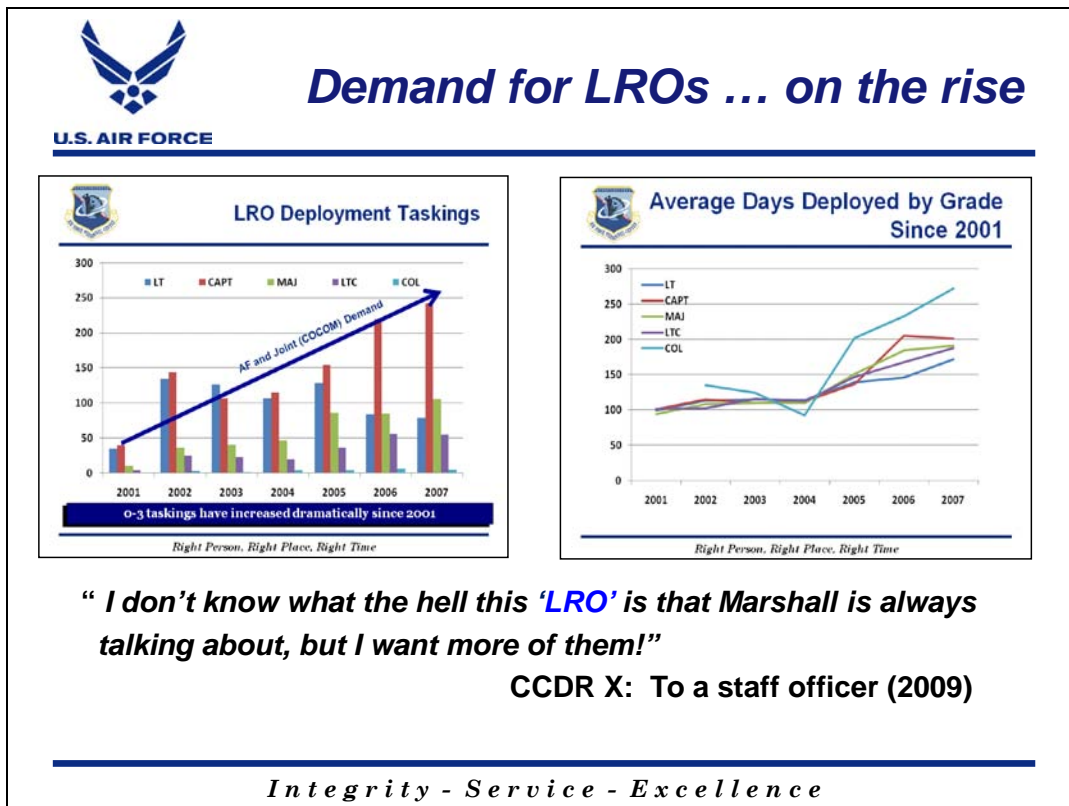
Figure 5: Demand for LROs (Bendall, 2009)

The second prevalent issue impeding the LRO's ability to complete core competency training and qualification is the constant shuffling of LROs within the squadron to fill key leadership positions. For example, if the LRO, currently serving as the wing's installation deployment officer is deployed, a very important position in the squadron and the wing is vacated. The squadron commander will shift an LRO from

another section to fill in and cover that key position. This type of situation makes it difficult for the LRO in training to stay in one functional area and meet qualification standards.

Critical Functional Skills for LROs

There are many functional skills required of an LRO. The expert panel determined the top critical functional skill of an LRO is to have installation deployment officer (IDO) experience, along with gaining experience in deployment operations, TPFDD management, and beddown support planning. The knowledge and experience gained in contingency operations core competency training will prepare an LRO with these critical functional skills if the LRO is given time to complete the training. The most visible LRO position in Logistics Readiness Squadron is the IDO position. As the IDO, the LRO is appointed by the wing commander to be responsible for deploying the wing's aircraft, people and equipment in support of wartime missions. The second critical functional skill determined to be extremely important by the field of experts is that of leadership. Webster's (2009) online dictionary defines leadership as "The quality of character and personality giving a person the ability to gain the confidence of and lead others". Due to the dynamic and critical nature of the responsibilities found within the Logistics Readiness Squadron, the LRO needs to gain the knowledge and experience of each functional area. Having the functional knowledge and experience combined with effective leadership skills will enable the LRO to gain the support and trust of the people and lead them to mission success.

Significant Expert Panel Feedback

Several respondents took the time to provide additional comments. While many of these comments could not be included in this study, several offer important insight. Appendix D includes responses to two background questions and begs the opportunity to be reviewed given the timely Air Force Chief of Staff's concern of LROs becoming "generalized and lacking expertise levels".

Importance of a Strong Technical Foundation

This research study presented this question to the field of experts, "How important is it for an LRO in today's Air Force to have a strong foundation of core competency knowledge and skills"? Nineteen responses to this question are provided in Appendix D. Each response emphasized the importance of LROs having a strong technical foundation. The best opportunity for LROs to gain a strong technical foundation is during their core competency training. Having a strong technical background foundation will assist the LRO with answering important logistical questions presented by the wing's leadership later in their careers as an operations officer or squadron commander.

Perceptions on Current LRO CFETP

Feedback from the field confirmed the obvious, the current LRO CFETP is outdated and not in touch with current LRO technical knowledge demands. The good news is that Air Force's LRO force development office is planning to release a new LRO CFETP to the field in October 2009. This new CFETP will be updated to include new training requirements that better align with the current LRO homestation and deployed demands.

Importance of Integrated Knowledge

Before 2002, logistics officers in their respective disciplines of supply, transportation, and logistics plans were "stovepiped". In many situations, a supply officer could speak supply but could not speak logistics plans and vice versa. The Air Force sends young logistics officers to contingency locations to perform cross-functional logistics duties without the training required to do their jobs (Hall, 2003). Through lessons-learned reports, deployed commanders have emphasized the importance for a logistics officer who could perform cross-functional logistics duties while deployed (Hall, 2003).

The future of LRO core competency training and qualification should include a development of integrated or joint logistics knowledge. The days of an LRO deploying to work solely Air Force logistics are now in the past. The future of LRO deployments includes LROs integrating with other services to support joint operations. LROs should expand their knowledge of joint logistical operations in order to be better integrated and utilized while deployed.

Recommendations for Future Research

This research study was exploratory in nature and there are many areas for additional research. This Delphi study focused on the expert opinions of Logistics Readiness Squadron commanders and operations officers within ACC. Although the majority of Logistics Readiness Squadrons and training opportunities reside within ACC, gaining the expert consensus of the squadron commanders and operations officers of the other major commands (larger sample size) would add more validity to the final results,

especially now with the CSAF being very interested in the topic of LRO core competency training.

Another area of research would be forecasting the possibility of implementing a standard process for validating if core competency knowledge was transferred through training. Currently, there is no standard means for confirming the proficiency and knowledge of the LROs following their core competency training. Having a standard evaluation in place would help to standardize the qualification process thereby developing qualified LROs who not only have the same qualification on paper but are able to perform the same duties for which they are qualified.

With the recent concerns on LRO core competencies expressed by senior Air Force leadership, research conducted to determine best options for balancing deployment needs with LRO core competency training and qualification would be of great benefit to LRO force development teams.

Finally, a Delphi study on the likelihood of implementing an Air Force LRO training database to manage and standardize LRO training could be conducted to determine if there is value in having such an informational system and what capabilities would be included in this type of system.

Summary

When the researcher contacted ACC/A4R about the topic of LRO core competency training and qualification, he received detailed concerns about issues affecting LRO training. Some of these issues affecting LRO competency training included high opstempo (deployed and at home), outdated CFETP geared more toward steady state ops than deployed, lack of training evaluation, and task saturation. Due to

39

the broad nature of the many issues surrounding LRO core competency training and qualification, the researcher utilized a small review panel to decide on three primary Delphi questions that if properly administered to the field of experts could yield important information useful to the research sponsor and others in support of LRO core competency training and qualification.

This research study, using expert consensus, identified the definition of a qualified LRO, the issues impeding LRO core competency training and qualification and the critical functional skills required on a qualified LRO. The results of this study are timely and can be used to support Air Force research currently underway to identify what is a logistics officer today and for the future.

Appendix A: First Round Questionnaire

Part I: Demographic and Background Data

1. What is your rank?

2.   How many years of service in the USAF?

3. How long have you been managing your LRO core competency training? Example:
    Weeks, Months, Years.

4. In your opinion, how important is it for an LRO in today's Air Force to have a strong
    foundation of core competency knowledge and skills? Please explain.

5. Do you believe our current AF LRO core competency training program is designed to
    produce LROs with strong functional foundations for peacetime and wartime
    functions? Please explain.

Part II: LRO Qualification

Qualification training as defined by the LRO CFETP is hands-on task performance-based
training designed to qualify an officer in a specific duty position. This training occurs
both during and after the upgrade training process and is designed to provide
performance skills training required to do the job.

Per the 2002 LRO CFETP, to become fully qualified officers must complete as least 12
months in each of the three core competencies: distribution management, materiel
management and contingency ops.

In the section below and in bullet format, please answer the following questions:

1. In your own words and *without using the CFETP*, what is your definition of a
    "qualified" LRO?

2. In your opinion, please list the challenges preventing or impeding LROs from
    completing core competency training? Example: Deployments, Exercises, New
    Assignments.

3. In your opinion and *without using the CFEPT*, please list the critical functional skills
    you believe are required for an LRO to be considered "qualified"? Examples: Leads
    a flight, able to explain/comprehend the DIFM cycle and brief at an IREP meeting,
    understand principles of fuel accounting and role of DESC, direct a deployment as an

Installation Deployment Officer from initial tasking through concept brief through personnel/cargo processing.

Appendix B: Second Round Questionnaire

LRO Core Competency Qualification
Round 2

Thank you for participating in this important research study. I appreciate your time and candid responses. The sponsor for this research is Col Jorge Acevedo, ACC/A4R. The focus of this research is on LRO core competency training and qualification. Please note:

1.   Survey responses are confidential. Your identity (name or duty title) will not be associated with any responses you give in the final research project. Summarized responses will be releasable to the public under the Freedom of Information Act, but your identity and/or organizational information will not be associated with a questionnaire and will be known only by me. The survey is administered under the AFIT Survey Control number SC 09 006.

2.   This is round two of the Delphi research. The purpose of this round is to rank-order your responses from the first round in an effort to reach consensus. Subsequent rounds will be announced as needed and all research will conclude by June 2009.

3.   Please complete this second round survey and return it electronically to: Trace.Steyaert@afit.edu no later than **7 May 2009**. If you have questions on the survey or the process, please call me or my advisor, Maj Skipper, at DSN 255-3635, ext 7948.

4.   **INSTRUCTIONS.** Below, each question has ten responses that **are not** rank-ordered. Please rank-order the ten responses for each of the three questions in priority of importance beginning with number 1 as being most important to number 10 being least important. *Please no ties between responses.*

1.   Original Question: *What is your definition of a "qualified" LRO?*

Rank-order (1-10, 1 being most important):   Field Responses:
_____ Competent understanding and knowledge of the LRO core competencies, completed all CFETP training tasks and has all special experience identifiers (SEIs)
_____ Proficient understanding and knowledge of base level logistics functions (LRS or APS) and their interrelationships
_____ Understanding of AF supply chain management and doctrine
_____ Demonstrates good communication/managerial skills, is an adaptive plus independent worker and is accountable
_____ Deep understanding and knowledge of strategic level logistics functions
_____ Received AFIT logistics management degree, training certifications (i.e., supply chain management), career broadening (i.e., acquisitions, LCBP)
_____ Deployed at least twice for 120 days each deployment

_____ Knows when and how to ask questions and get needed answers
_____ An officer that can lead as a Flight Commander with little supervision
_____ Experience with and conversant knowledge in Joint and AF logistics

2.   Original Question: ***What are the challenges impeding progress of LRO core competency training?***

Rank-order (1-10, 1 being most important):   Field Responses:
_____ Deployments
_____ Exercises and inspections
_____ New assignments and assignment duration
_____ Availability of time due to high homestation opstempo (wing and squadron mission)
_____ Lack of leadership involvement
_____ Additional duties
_____ Family responsibilities and issues
_____ Outsourcing former LRO duties and converting LRO position to civilian
_____ Manpower shortages and lack of qualified trainers
_____ Constant shuffling of LROs to fill key vacant LRO positions

3.   Original Question: ***What are the critical functional skills required of a "qualified" LRO?***

Rank-order (1-10, 1 being most important):   Field Responses:
_____ IDO experience, deployment operations, TPFDD management, support planning (IGESP/beddown)
_____ Briefing and analytical skills
_____ Supply management, WRM management, warehouse management, HAZMAT
_____ Understands logistics information systems (SBSS, DCAPES, GDSS, GATES, LOGMOD, OLVIMS, etc…)
_____ Manage squadron ART and SORTS programs
_____ Vehicle management and vehicle operations (including convoy operations)
_____ Fuels management
_____ Aerial port operations, cargo movement, load planning, TMO
_____ Administrative experience (awards, decorations, performance reports, budget, discipline issues, enlisted promotion system)
_____ Leadership

Appendix C: Third Round Questionnaire

LRO Core Competency Qualification
Round 3

Thank you for continued participation in this important research study. I appreciate your time and candid responses. The sponsor for this research is Col Jorge Acevedo, ACC/A4R. The focus of this research is on LRO core competency training and qualification. Please note:

1. This is round **three** of the Delphi research. The purpose of this round is to review the rank

   order developed from your responses received in round two in an effort to reach a consensus. Subsequent rounds will be announced as needed and all research will conclude by June 2009.

2. Please review and complete the instrument below and return it electronically to: Trace.Steyaert@afit.edu no later than **14 May 2009**. If you have questions on the survey or the process, please call me or my advisor, Maj Skipper, at DSN 255-3635,ext 7948.

INSTRUCTIONS. Review the group-determined rankings for each question. The current ranking provided in the table below is based on the average weighted response from round two. **If you agree with the current ranking as provided, please check the "I agree with this list as provided" block. If you do not agree, please re-rank the responses using the empty box on left of table and return to Maj Steyaert**. Remember, there are three questions.

New Rank	Group Rank	Item
Question 1: What is your definition of a "qualified" LRO?		
	I agree with this list as provided.	
	1	Competent understanding and knowledge of the LRO core competencies, completed all CFETP training tasks and has all special experience identifiers (SEIs)
	2	Proficient understanding and knowledge of base level logistics functions (LRS or APS) and their interrelationships
	3	Understanding of AF supply chain management and doctrine
	4	Experience with and conversant knowledge in Joint and AF logistics
	5	Demonstrates good communication/managerial skills, is an adaptive plus independent worker and is accountable
	6	An officer that can lead as a Flight Commander with little supervision
	7	Deep understanding and knowledge of strategic level logistics functions
	8	Knows when and how to ask questions and get needed answers
	9	Received AFIT logistics management degree, training certifications (i.e., supply chain management), career broadening (i.e., acquisitions, LCBP)
	10	Deployed at least twice for 120 days each deployment

Question 2: What are the challenges impeding progress of LRO core competency training?		
New Rank	**Group Rank**	**Item**
	I agree with this list as provided.	
	1	Deployments
	2	Constant shuffling of LROs to fill key vacant LRO positions
	3	Availability of time due to high homestation opstempo (wing and squadron mission)
	4	Exercises and inspections
	5	Lack of leadership involvement
	6	Manpower shortages and lack of qualified trainers
	7	Additional duties
	8	New assignments and assignment duration
	9	Outsourcing former LRO duties and converting LRO position to civilian
	10	Family responsibilities and issues

Question 3: What are the critical functional skills required of a "qualified" LRO?		
New Rank	**Group Rank**	**Item**
	I agree with this list as provided.	
	1	IDO experience, deployment operations, TPFDD management, support planning (IGESP/beddown)
	2	Leadership
	3	Supply management, WRM management, warehouse management, HAZMAT
	4	Briefing and analytical skills
	5	Aerial port operations, cargo movement, load planning, TMO
	6	Fuels management
	7	Understands logistics information systems (SBSS, DCAPES, GDSS, GATES, LOGMOD, OLVIMS, etc…)
	8	Vehicle management and vehicle operations (including convoy operations)
	9	Manage squadron ART and SORTS programs
	10	Administrative experience (awards, decorations, performance reports, budget, discipline issues, enlisted promotion system)

Appendix D: Additional Expert Panel Responses

In your opinion, how important is it for an LRO in today's Air Force to have a strong foundation of core competency knowledge and skills? Please explain.

R1: Imperative – our LROs have to be able to perform effectively in a multitude of situations that require them to well versed in USAF and joint logistics doctrine and concepts.

R2: I need the Lts/Capts to thoroughly understand their jobs and to lead…difficult to do, but possible. A good foundation sets them up for success later. A good variety of jobs at different commands/bases helps. I definitely stress IDO, POL, and Aerial Port jobs. Materiel Management follows that.

R3: Extremely important—however, JET is not allowing for continuity of training. Our LRO CGOs need to be able to ask informed questions of our Logistics Enlisted personnel.

R4: Supremely important! When we created the LRO a few years back, we placed three times the responsibility on our logistics officers. In order for this to work in the long term, we have to ensure we spend the first four years developing and training our officers in all aspects of logistics. Although it takes only a cursory knowledge of logistics to perform as a flight commander (leading to the tendency to short-change our LROs in their core training and use them as flight commanders too early), as an LRO progresses to staff and joint positions, in-depth knowledge of all aspects of logistics becomes critical. A lack of depth manifests itself in the form of poor policy decisions, inadequate understanding of supply chain functions external to the base (which constitute 90% of them now), and LROs who are ill-suited for command of one of the most diverse (and critical) squadrons in a wing.

R5: It is the most crucial issue, i.e. we are pushing these LROs so hard to just gain an understanding of what they are supposed to accomplish. And then rotating them to another job, or deploying them, and etc (extra duties). In the past you could breath as a young officer, where now you have to hit the ground running on learning everything (supply (material management, deployment and distribution, vehicle mx, and fuels)

R6: It's important, but the biggest thing is leadership and attitude. Don't be afraid to question, research and verify information, processes and procedures.

R7: Extremely important…the more time w/ hands-on experience in a flt assists from a learning experience that the CGO can pull from later as a field grade officer…the more you know, the further you can go!

R8: Personal opinion is that the foundational knowledge and skills have become meaningless in the face of deployments. Most tasks assigned to LROs require their leadership abilities and knowledge of processes learned at the deployed location. Homestation duties are a different animal and require that knowledge to effectively manage garrison operations. Several of the LROs in the unit have learned more in the 6 months prior to the LRO course through hands-on experience and delving into the applicable AFIs than they gleaned from formal education.

R9: Extremely. As our officer corps becomes more generalist in nature, it is incumbent upon the trainers to ensure as much knowledge is gained by the student as possible, to avoid more atrophy of knowledge than the minimum.

R10: Very important, especially since the LRO creates such a broad range of responsibility. Obviously, makes gaining that knowledge and skill that much more difficult to obtain than pre-LRO because officers don't have as much time in a functional area as they did in the 21G/21S/21T days.

R11: We're at WAR, need I say more?

R12: I feel it's very important to have a strong familiarization with the subject, but not a mandated time in that area.

R13: Very important. We have to be able to get these skills at home station as best we can, even though we are not necessarily using the same skills while deployed. We still need to have expertise and can't rely on our NCOs and SNCOs completely, as their PERSTEMPO is almost as high as ours. Additionally, we will be working with peers in other, "more focused" career fields who will be experts (CE, Acft Mxs) and expect the same from us.

R14: It is the most crucial issue, i.e. we are pushing these LROs so hard to just gain an understanding of what they are supposed to accomplish. And then rotating them to another job, or deploying them, and etc (extra duties). In the past you could breath as a young officer, where now you have to hit the ground running on learning everything (material management, deployment and distribution, vehicle mx, and fuels)

R15: Extremely important…our accountability for such things as nuclear weapons related materials, and the processes that move those materials, and the impact that has had on the careers of our most senior AF leadership makes that extremely evident.

R16: Vitally important. The issue isn't whether or not they need it; it's how long we keep LROs in their positions We as a community need to face the facts that 12 months in a designated area implies that knowledge has not only been received but can be put to

use. The Air Force should look at updating the 12 month requirement to 18 months minimum for all flights except for Deployment & Distribution; this flight should be a minimum of 24 months based solely on the complexity and diversity of the flight.

R17: Very important…sometimes LRO's are put in environments where their knowledge and skills are heavily relied upon. It's imperative we are competent in what we do and tell others.

R18: Very important. It's hard to find an LRS that's manned at 100% and with the increased deployment tempo the LRO's need a strong foundation to lead their flights and to make sound decisions at home station and at deployed locations.

R19: LRO's need a solid foundation in the three core areas. This is paramount, as the rest of their career experiences build from the initial foundation.

Do you believe our current AF LRO core competency training program is designed to produce LROs with strong functional foundations for peacetime and wartime functions?

R1: Would not necessarily use the word "strong" foundation, especially WRT to wartime functions. The program may be "designed" to produce "strong" functional foundations but meeting the intent is a challenge, as was mentioned earlier, due to deployment tempo and manpower fluctuations.

R2: No. It lays a foundation, but the OJT our CGOs are receiving as a result of GWOT are catapulting them well past the level of training I had as a CGO.

R3: Designed, yes, followed in a standardized way, no.

R4: It is the best we can do given our current environment. "Functional foundation" is an interesting term. With centralization of many of the LRS functions the core SMEs that were grown at base level are no longer there to pass on the foundations of the LRS processes.

R5: I believe it's designed that way, at least for base level functions, but I don't believe it's practiced that way. The blocks are all in place, but we don't effectively use them. The other gaping hole in our LRO development is a by-product of regionalization. The vast majority of LROs spend their formative years at base level, which is essentially a storage and distribution center under our current structure. The result is that LROs miss out on supply chain experience and training that we used to get at base level (stock control and MICAP, requirements process, transportation planning and scheduling, etc.) Again, this builds a shaky foundation as they move on to staff jobs and command.

R6: No, the construct needs to be more structured in the LRO competency training program. Given our present work environment (do more with less), it leaves numerous areas that can fail these young Lts/Capts to which they are not trained b/c of the last bases resources or lack of training.

R7: Additionally, the time needed to accomplish training should be increased to 18-24 months for D&D and Mat Mgt. Fuels and Veh Mgt...12 months is ok...IDO should be 18 months due to some outside training involved and the necessary return on that investment from a productivity standpoint.

R8: No. The current training program is meant for garrison (peacetime) operations and was developed based on processes and procedures inherent in the original organizations (LSS, SUPS, TRANS). The workforce is changing (enlisted AFSC mergers, and unit reorganizations) more quickly than the curriculum can handle to keep up. I would not be surprised if a survey of LRO course and enlisted tech school course attendees found that the instruction did not match the current reality.

R9: No. The training LROs receive is the bare minimum to function in those areas. When the 21G/T/S AFSCs merged, the LRO training requirement precludes the in-depth training of critical processes historically valuable skill sets within the legacy AFSCs.

R10: No…although it does create an environment that broadens our officers, it doesn't give the opportunity for deep functional foundations that they are expected to have at home station and while deployed.

R11: Yes, it's the best way to ensure they are seeing as many areas as possible, however, once they touch a completely new core competency, it may water down what they've already learned in the last one.

R12: It depends on what you decide is a wartime function. As I mentioned, none of my CGO LROs are currently deployed in "traditional" LRO jobs in an ELRS or EAPS. They are doing convoy duty, training teams or other jobs. In that case, the current training program does not provide them with the necessary skills by itself. The peacetime foundation is strong.

R13: The current program trains LRO's adequately for peacetime functions, however, most wartime functions receive attention in around exercises. Additionally, our wartime tasks now are geared more towards filling joint expeditionary positions rather than our traditional AF functions.

R14: No, the construct needs to be more structured in the LRO competency training program. Given our present work environment (do more with less), it leaves numerous

areas that can fail these young Lts/Capts to which they are not trained b/c of the last bases resources or lack of training.

R15: Absolutely not… but neither is our organization. I haven't had an LRO yet, (or myself for that matter) deploy in a tasking that had anything to do with what we do at a home-station LRS. The joint jobs don't match up. We don't do anything at all home station that even remotely prepares us for convoy ops, yet that's what we're doing deployed. Yet next door to us the Air Control Squadron has full up exercises (internally) their officers learning Tactics Techniques and Procedures for convoy ops on a regular basis (oh yeah…they hardly ever convoy when deployed).

R16: No. Our current core competencies allow us to provide minimal training (enough to CYA) before we are forced to send unqualified junior officers into the field where they may be forced to work a job in a joint environment where not only is the joint environment tough to acclimate to, but they may not even have the ability to lead a flight at home station.

R17: I believe the intent is there. No one wants to put out a bad product and I don't believe the AF has one. As stated earlier, I believe the standardization issue should probably be looked at to ensure each LRO has the same basis across the board.

R18: Yes. The CFETP has plenty of items that gives the LRO a strong foundation. I would suggest making the time they spend in each SEI longer for the simple fact that 1yr isn't enough time especially in Contingency Operations. Two years in contingency Operations would be enough to make them comfortable and give them the experience they need to be successful and 18 months in the other SEIs.

R19: No – LRO's are being made to be the "jack of all trades" and are too broad in their career experience. We are expected to be able to master any logistic area in a year or so. Because of the current qualification structure, we don't become experts at any specific area.

Bibliography

Baldwin, T. T., & Ford, J. K. (1988). "Transfer of training: A review and directions for future." *Personnel Psychology, 41*(1), 63.

Bendall, C. Briefing, Air Force Officer Classification Directory Change. HAF/A4LF, Pentagon, USAF, Washington, D.C. May 2009.

Bendall, C. Briefing, 21R Development Team Meeting, April. HAF/A4LF, Pentagon, USAF, Washington, D.C. April 2009b

Brancheau, J.C., & Wetherbe, J.C. (1987). "Key issues in information systems management." *MIS Quarterly*, 11(1), 23-45.

Blumenfeld, W. S., & Holland, M. G. (1971). "A model for the empirical evaluation of training effectiveness." *Personnel Journal (Pre-1986), 50*(000008), 637.

Boone, C.A. (2006). "*Managing service inventory in the supply chain*." Auburn University, Auburn, AL.

Brockhoff, K. (1975). *The performance of forecasting groups in computer dialogue and face-to-face discussion*, In H.A. Lindstone (Ed.), The Delphi Method: Techniques and applications. Reading, MA: Addison-Wesley.

Brown, B.B., (1968). *Delphi Process: A methodology used for the elicitation of opinions of experts.* The Rand Corporation, Santa Monica, CA.

Cegielski, C.G. (2007). *Toward the development of an interdisciplinary information assurance curriculum: Knowledge domains and skill sets required of information assurance professionals.* Auburn University, Auburn AL.

Churchman, C.W., & Schainblatt, A.H. (1965). "The researcher and the manager: A dialectic of implementation." *Management Science*, 11(4), B-69-B-87.

Crable, Robert J., Captain. (2007). "Are logistics readiness officers performing non-traditional logistical duties while deployed?" Advanced Logistics Officer Readiness Course. Ft Dix, NJ

Dalkey, N., & Helmer, O. (1963). "An experimental application of the Delphi method to the use of experts." *Management Science*, 9(3), 458-467.

Department of the Air Force. (2008). *Air force logistics readiness strategic plan,* Headquarters, USAF, A4R, Washington D.C.

Department of the Air Force. (2008). *Air force program action directive 08-01,* Headquarters, USAF, Washington D.C.

Department of the Air Force. (2002). *Career field education and training plan logistics readiness officer AFSC 21RX*, Headquarters, USAF, A4R, Washington D.C.

Department of the Air Force. (2007). *Air Force Officer Classification Directory (AFOCD).* Headquarters, AFPC/DPPC, Randolph Air Force Base, San Antonio, Texas.

Facteau, J. D., Dobbins, G. H., Russell, J. E. A., Ladd, R. T., & Kudisch, J. D. (1995). "The influence of general perceptions of the training environment on pretraining motivation and perceived training transfer." *Journal of Management, 21*(1), 1.

Ford, J. K., Quiñones, M. A., Sego, D. J., & Sorra, J. S. (1992). "Factors affecting the opportunity to perform trained tasks on the job." *Personnel Psychology, 45*(3), 511-527.

Gist, M. E., Bavetta, A. G., & Stevens, C. K. (1990). "Transfer training method: Its influence on skill generalization, skill repetition, and performance level." *Personnel Psychology, 43*(3), 501-523.

Goldsby, T. and Martichenko, R. *Lean Six Sigma Logistics*, Boca Raton, Florida: J. Ross Publishing, 2005.

Griffis, S.E., Goldsby, T.J., & Cooper, M. (2003). "Web-based and mail surveys: A comparison of response, data, and cost." Journal of Business Logistics, 24(2), 250.

Hall, J. R. (2003). "Agile combat support doctrine and logistics officer training [electronic resource] : Do we need an integrated logistics school for the expeditionary air and space force?" Air University, Maxwell AFB, AL.

Hicks, W. D., & Klimoski, R. J. (1987). "Research notes. Entry into training programs and its effects on training outcomes: A field experiment." *Academy of Management Journal, 30*(3), 542-552.

Hobbs, Sarah E., 1LT,USAF. (2005). "Assessing influences on perceived training transfer: An investigation of perceptions of air force logistics readiness officer technical school graduates." Air Force Institute of Technology, Wright-Patterson AFB, OH.

Huscroft, J.R. (2008). "Practical challenges in managing the reverse logistics process in a supply chain." Auburn University, Auburn, AL

Kendall, M., & Gibbons, J.D. (1990). *Rank correlation methods.* New York: Oxford University Press.

Krippendorff, K. (2004). *Content Analysis: an Introduction to Its Methodology (2e).* Thousand Oaks, CA: Sage Publications, pgs 413.

Larson, Kirk P., CAPT, USAF. (2008). "Forecasting expeditionary training for company grade logistics readiness officers: A Delphi Study." Air Force Institute of Technology, Wright-Patterson, AFB, OH.

Landis, J.R., & Koch, G.G. (1977). "The measurement of observer agreement for categorical data." (Vol. 33, pp. 159-174): International Biometric Society.

Linstone, H. A., & Turroff, M. (1975). *The Delphi Method: Techniques and Applications.* MA: Addison-Wesley.

Lovewell, James R. MAJ, USAF. (2007). "Examination of the logistics readiness officer (LRO) training model." Advanced Logistics Readiness Officer Course, Ft Dix, NJ.

Malhotra, M.K., Steele D. C., & Grover, V. (1994). "Important strategic and tactical manufacturing issues in the 1990s." *Decision Sciences*, 25(2), 189-214.

Marino, J.P. (1983). *Technological Forecasting for Decision Making.* New York: Elsevier.

McCoy, Gary. MGEN, USAF. (2008). LRO update briefing. Posted on the HAF Logistics Readiness CoP. https://wwwd.my.af.mil/afknprod/ASPs/docman/DOCMain.asp?Tab=0&FolderID= OO-LG-RE-02-12&Filter=OO-LG-RE-02

Mitchell, V.W., (1991). *The Delphi technique: an exposition and application* (Vol. 3, pp. 333-358): Routledge.

Nambisan, S., Agarwal, R., & Tanniru, M. (1999). "Organizational mechanisms for enhancing user innovation in information technology*." MIS Quarterly*, 23(3), 365-395.

Ogden, J.A., Peterson, K.J., Carter, J.R., & Monczka, R. M. (2005). "Supply management strategies for the future: A Delphi Study." *Journal of Supply Chain Management: A global review of purchasing & supply*, 41(3), 29-48.

Okoli, C., & Pawlowski, S.D. (2004). "The Delphi method as a research tool: An example, design consideration and applications." *Information Camp; Management*, 42(1), 15(15).

Olshfski, D. & Alma J. (1991). "Assessing training needs of executives using Delphi technique." *Public Productivity and Management Review*, 14, 3:297-301

Paliwoda, S.J. (1983). "Predicting the future using Delphi." *Management Decision,* 21(1).

Salas, E., Milham, L. M., & Bowers, C. A. (2003). "Training evaluation in the military: Misconceptions, opportunities, and challenges." *Military Psychology, 15*(1), 3-16.

Schmidt, R.C. (1997). "Managing Delphi surveys using nonparametric statistical techniques." *Decision Sciences*, 28(3), 763-774.

Schmidt, R.C., Lyytinen, K., Keil, M., & Cule, P. (2001). "Identifying software project risks: An international Delphi study." *Journal of Management Information Systems*, 17(4), 5-36.

Taylor, R.E., & Meinhardt, D.J. (1985). "Defining computer information needs for small business: A Delphi method." *Journal of Small Business Management*, 23(2), 3-9.

Thayer, Paul W. Teachout,Mark S. (1995). "A climate for transfer model. *Technical Report"* , 44.

Webster's Online Dictionary. "Definition of the word Leadership." Definition from website. http://www.websters-online-dictionary.org/. 3 June 2009.

Wexley, K. N., & Baldwin, T. T. "Posttraining strategies for facilitating positive transfer: An empirical exploration." *Academy of Management Journal, 29*(3), 503(18).

Vita

Major Steyaert graduated from Northern Arizona University with a Bachelor of Science degree in Health and Wellness Management and he was commissioned through the USAF Reserve Officer Training Corp in 1995. Additionally, he earned a Master's degree in Business Organizational Management from the University of Phoenix in 2004.

His first Air Force logistics assignment was to Beale AFB, California culminating as flight commander and the Installation Deployment Officer. Next, he was assigned to Osan AB, Korea as the 51st Fighter Wing's War Reserve Materiel Officer in charge of a $64 million dollar program. Following Korea, he was assigned to 12th Air Force, Davis-Monthan AFB, Arizona, and was responsible for logistics operations and support plans in USSSOUTHAF. Following 12 AF, he was hand-selected to be an instructor and stand-up the Advanced Maintenance and Munitions Officers School (USAF AMMOS) at Nellis AFB, Nevada. Next assignment was the operations officer for 28th Logistics Readiness Squadron at Ellsworth AFB, South Dakota. During the past 14 years, Major Steyaert has served in many major military exercises and he has deployed to Southwest Asia twice (Iraq & Saudi Arabia) and to West Africa (Liberia) to work critical logistical positions.

In June 2008, he entered the Graduate School of Engineering and Management, Air Force Institute of Technology to complete his Intermediate Developmental Education. Upon graduation, he will take command of the 509th Logistics Readiness Squadron at Whiteman AFB, Missouri.

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (From – To)
06-18-2009	**Master's Thesis**	Jun 2008 – Jun 2009

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
DEVELOPING QUALIFIED LROs WITHIN AIR COMBAT COMMAND: A DELPHI STUDY	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)	5d. PROJECT NUMBER
Steyaert, Trace B., Major, USAF	5e. TASK NUMBER
	5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAMES(S) AND ADDRESS(S)	8. PERFORMING ORGANIZATION REPORT NUMBER
Air Force Institute of Technology Graduate School of Engineering and Management (AFIT/EN) 2950 Hobson Street, Building 642 WPAFB OH 45433-7765	AFIT/ILS/ENS/09C-05

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
ACC/A4R Attn: Col Jorge Acevedo DSN: 574-3414 130 Andrews St Ste 211 Langley AFB, VA 23665 e-mail: Jorge.Acecedo@langley.af.mil	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

After completing the basic technical Logistics Readiness Officer (LRO) course, the LRO returns to their assigned base and begins core competency on-the-job training. In order to become qualified, the LRO must be assigned to at least one proficiency in each of the three core competencies (material management, distribution management, and contingency operations) for at least twelve months and complete all training tasks for each proficiency. The foundation of technical knowledge and skills gained through core competency training will guide the LRO in future assignments to include being an effective operations officer and a squadron commander. However, the current high operations tempo and demand for LROs in support of Operation Iraqi Freedom and Operation Enduring Freedom along with the high mission demands at base level are negatively affecting completion of LRO core competency training. Also disrupting the completion of core competency training are the many career broadening opportunities, i.e., executive officer, instructor, 365 day TDYs that often pull the LRO away from core competency training. The objective of this study is to gather expert opinion on LRO core competency training and qualification from a panel of experts, the current operations officers and squadron commanders, who are responsible for managing, training and qualifying LROs. These experts know firsthand the challenges and issues affecting the training progress of LROs. Results from this research will be provided to ACC's Logistics Readiness Division, the study's sponsor, who is responsible for LRO force development.

15. SUBJECT TERMS

Core Competency Training, Evaluation, Management, Expertise, Logistics Readiness Officer

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Joseph B. Skipper, Major, USAF (ENS)
U	U	U	UU	67	19b. TELEPHONE NUMBER (Include area code) (937) 255-6565, ext 7948; e-mail: joseph.skipper@afit.edu