










# Lessons Learned

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There are two general overriding lessons learned from the experience of developing the DON TQL E&T program. The first is that in an undertaking of the size and complexity of this one it is much more difficult to achieve than at first anticipated. The second, partly because of the first, is that it will take much longer than originally thought. The following are some examples of these two lessons.

Many lessons were learned from the processes of designing, establishing, and maintaining the education and training program that could make these processes less difficult and time consuming for others. Some of these lessons include the following:

-  part-time assignment on the design team slows the design process
-  changing membership on the design team affects team efficiency
-  unclear guidance leads to confusion and false starts in the design process

-  operating without agreed-upon process procedures is both inefficient and ineffective
-  teams can benefit from the help of a facilitator and a technical advisor
-  the design team's level of knowledge about the change being implemented has a major affect on the time it takes to design the education and training program and to implement the change it supports
-  the selection of course development agents can affect development time and curriculum quality
-  organization location of the education and training program can affect participation in the program
-  compliance with education and training program requirements can affect adherence to delivery strategies

A discussion of these and other lessons learned are presented below.

## The Design Process

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Once the top leaders in the DON decided they wanted to embark on the quality journey to transform the Department, they realized it was going to require a lot of new knowledge and skills to help achieve that transformation.

To get the ball rolling, the ESG formed the E&T program design team to begin the formulation of a comprehensive education and training strategy. Other than stating the overall purpose of supporting TQL implementation in the DON, the ESG provided no other initial guidance. It was left to the designated chairman of the team to determine who should be on the team and how it should proceed.

The first thing the chair of a new group needs to do (unless this is specified by the establishing authority) is to determine membership on the group. The initial membership of the team included representatives from Navy, Marine Corps, civilian community, and major commands where quality initiatives were being undertaken. Initial group size was eleven members, including the chairman. The second major task of the chair is to guide the transformation of the group into a team. This was not accomplished very effectively because the chair was a major contributor of content to the process while trying to be a process facilitator and technical advisor at the same time.

To function as an effective team there should have been an agreed-upon set of operating procedures which include a specific set of decision-making rules. Should decisions be made by consensus or by voting? If by voting, should it be secret or open? Should it be by majority, plurality, unanimous, or some fixed percentage of the vote? This issue was never resolved by the design team. The result was that some decisions were readdressed more than once

leading to reduced efficiency and effectiveness of the team.

The team membership was constantly changing. Sometimes this happened because a member had other priorities/demands of their “real” job. It was voluntary duty. Membership also changed because “interested parties” decided on their own that they would like to be part of the team. Existing members refused to accept a set of criteria determining membership. When new members came to meetings they would often raise questions or issues that had already been decided. The team members allowed these settled issues to be reconsidered, sometimes many times over. The rationale for a non-fixed membership was to encourage inclusiveness and buy-in from a broad spectrum of DON elements. The price of this rationale was increased turbulence in team meetings and delays in completing tasks.

In general, the team did not want to be bound by any set of “restrictive” rules or procedures. This led to very inefficient operation and progress was made painfully and slowly.

Another major problem was that most of the members on the team had little or no knowledge about TQL. Only two or three members had attended any seminars or training sessions on TQL prior to becoming members of the team. To some extent this was unavoidable because TQL was still in its infancy. Whatever knowledge members had, there was no consistency because each command at that time

(February 1989) was “doing its own thing” regarding quality. The chair attempted to fill this gap by taking on the role of technical advisor to the team. This was a mistake. The chair was trying to fill three roles concurrently; the team leader, processes facilitator, and technical advisor.

The lesson learned from this experience is that you cannot develop a large-scale education and training program about a major organizational change if the members of the program design team do not have knowledge of the change. That lack of knowledge will lead to false starts and lengthen the time it takes to develop the program. It will also delay the implementation of change.

Finally, the chairman did not exercise the full authority given to him by the ESG to resolve some of the problems described above. These problems persisted over the course of the first six months of the work of the team. There was some improvement after six months when the ESG provided a charter to the team along with a list of specific tasks to be performed. This provided a framework, some boundaries, and specific products required of the team.

Related to the problem of inadequate and inconsistent levels of knowledge about TQL on the team was the absence of a formal policy document on TQL in the form of a Secretary of the Navy (SECNAV) Instruction or Directive. DON TQL policy was expressed in the form of a SECNAV “White Paper” published in June

1991<sup>2</sup>, and in the SLS which went on-line in January 1991. The culture of the DON is such that policy and requirements for its execution are typically followed if issued in the form of a SECNAV Instruction. Otherwise, it is considered guidance and not mandatory.

Although a draft TQL Directive was developed by the Fleet Quality Council in 1996, it was never officially promulgated in the DON. There was so much TQL education and training and TQL implementation by that time that a formal policy statement was probably not necessary. Such a formal policy document might have been useful in 1990, but top DON leaders did not want TQL to become a program with a prescribed check list of requirements. They felt that making TQL a program would have set the stage for mechanical compliance and eventual extinction of the TQL concept.

The lack of knowledge and absence of formal TQL guidance contributed to excessive variation and slowed the process of developing the TQL education and training strategy and program on the part of the team. Members of the team either did not understand TQL adequately enough or did not accept the TQL guidance as presented in the Secretary's "White Paper". The consequences of this was that some members of the team were constantly trying to redefine TQL, or were willing to have courses developed that were not consistent with one another or with SECNAV guidance.

A specific example of this inconsistency was the approach adopted by the team to develop some of the courses in the TQL curriculum. The approach was to designate certain organizations as Quality Management Groups (QMGs) and assign them responsibility for developing courses. The rationale for this approach was that it would save time and reward/recognize these organizations for their early successes with quality improvement.

There were two problems with this rationale. First, each of these organizations was implementing its own brand of quality which differed significantly from the DON guidance. And second, the design team provided inadequate guidance and coordination to the QMGs to ensure consistency among courses or with DON guidance. The result was that these courses were either completely redesigned or modified well into their development process causing significant delays in course development. Some of the inconsistencies remained in the curriculum when it went on-line in April 1992, resulting in some disconnects in the classroom. These inconsistencies were generally resolved following the curriculum revision workshop in March 1993. The major effect of not having an official document defining and requiring implementation of TQL, and a design team with insufficient knowledge of TQL was that TQL implementation in the DON was delayed.

Some of the problems noted above were alleviated when the team was restructured in early 1991. First, the ESG chartered an Advisory

Group (AG) for education and training in February 1991. The AG consisted of members of the ESG who had the authority to approve course content and commit resources for the establishment of the TQL E&T program infrastructure. The AG understood and followed the DON TQL guidance. They understood the need for and ensured the consistency of the DON TQL approach embodied in each of the DON TQL courses.

The AG chartered an education and training support group to take over the work of the original design team. This occurred in March of 1991. By April the support group had reformulated the TQL education and training strategy. It was presented to the Chief of Naval Operations on 1 April 1991 and the AG on 3 May 1991. The strategy and basic components of the E&T program were approved. It was this strategy and program that were actually implemented in the DON. The lessons learned here are that having the right members on the design team who understand the change to be implemented, and having the right guidance leads to the desired result in a reasonable amount of time.

## Establishing and Maintaining the E&T Program

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Central management and administrative control of the DON TQL E&T program was placed



under the authority of the Chief of Naval Education and Training. The TQL E&T program was co-located with the Navy Leadership (NAVLEAD) training program at Little Creek, Virginia, and Coronado, California. The advantages of geographic and organization co-location were that new administrative infrastructures did not need to be established and funded, and it allowed for more convenient integration of TQL into the NAVLEAD curriculum. The major disadvantage was that it didn't contribute to the integration of TQL in the Marine Corps or civilian training programs because TQL experts were not as readily accessible to the Marine Corps and civilian training communities as they were to the Navy.

Placing the TQL education and training program under the administrative control of CNET should not have prevented the integration of TQL in Marine Corps and civilian training programs. Aggressive and committed leadership in the Marine Corps and civilian community could have ensured integration in their respective training programs. The issuance of a DON directive requiring that integration in all components of the DON would also have overcome this problem. However, where there is committed leadership the issuance of mandatory requirements is unnecessary.

One problem that plagued administrators at the TQL schoolhouses was the admission of individuals to classes who did not meet the required prerequisites for admission. This resulted when classes were not completely filled

by qualified individuals and unqualified standbys were allowed in. This disrupted the train-the-trainer strategy. According to schoolhouse administrators, this situation became progressively worse over time. It is estimated that by 1997 the majority of attendees of DON TQL classes were end-users rather than trainers. How much this affected the achievement of training 150,000 critical mass members or introducing all DON personnel in TQL principles is unknown.

Since the first SLS was offered in January 1991, the DON TQL curriculum has undergone many changes. Each of the courses has been revised more than once in response to customer requirements. In 1997, a dramatic change in the curriculum had taken place. All of the five core courses except Team Skills and Concepts were reduced from nine days to five days in length. The second week of practicum and teach-backs has been replaced by an instructor training prerequisite. No longer were all students required to spend an extra four days learning skills that most of them already possessed. However, there was a price to pay. Reinforcement of learning through repetition and skills practice was lost.

In addition to shortening four courses, three of them were made available in 1997 for downloading from the TQL Office web page (<http://www.tql-navy.org>). The three courses are: Fundamentals of TQL; Implementing TQL Phase One: Process Management; and Team Skills and Concepts. By making these courses available over the Internet, a large number of individuals will

now have access to DON TQL courses. Another training resource made available on the web page is the DON Tools of Total Quality. This is a handbook of tools for basic process improvement in the form of a CD-ROM. This handbook is an expansion of the original CNO Starter Kit developed for Fleet use in 1993.

Because so much TQL education and training had already been provided through the TQL schoolhouses and other DON training venues, the need for tight centralized control of the curriculum was judged to be no longer necessary. While there may still be a number of home-grown TQL courses in use, the availability and pervasiveness of the DON TQL courses should be able to sustain the consistency of message the DON ESG worked so hard to establish.

A final word on how much education and training is enough to ensure continued implementation of change and transformation. The DON plan was to terminate the education and training program once the major objectives were met. But one of the objectives was to integrate TQL into other institutional training programs in order to sustain support of implementation and transformation over a long period of time. While the integration of TQL into the Navy leadership training pipeline has made substantial progress, integration into Marine Corps and civilian training has not progressed significantly. Now that the TQL education and training program has been discontinued it is uncertain whether the incomplete integration of TQL into DON institutional training programs will

affect the continued implementation and transformation envisioned for the future. Also, it is unknown whether the TQL education and training provided by the program from 1991 through 1997 is sufficient to sustain the change without an ongoing, stand-alone and training program.

# Recommendations

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The process of designing, developing, and managing a comprehensive education and training program in a large organization is both complex and time consuming. It is unlikely that there is one best way of doing it in all organizations. Based on the lessons learned from establishing the Department of the Navy's TQL education and training program, the following guidelines and recommendations are offered to anyone faced with a similar challenge.

## Program Goals and Objectives

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The first step in establishing an education and training program to support major organizational change is the articulation of its intended purpose. In the case of the DON E&T program the purpose was to support the implementation of TQL within the DON. This statement of purpose served as the overarching goal of the program. By itself, this statement was insufficient in guiding the

development of the program. Supporting goals needed to be articulated. For the DON E&T program these goals were: to train a critical mass of 150,000 individuals to begin phase one of TQL implementation focused on process management and improvement; to introduce all DON personnel to TQL principles and methods; and to integrate TQL into pipeline leadership training. A time-frame of approximately five to six years was established for the accomplishment of these goals. Major goals supporting the overarching goal or purpose of your education and training program should have a time-frame. The time frame will have an influence on the strategies you choose to accomplish your goals.

The importance of having clear goals and a time-frame for achieving them cannot be overstated. As many have learned through their own experience, “if you don’t know where you want to go, any road will take you there.” The leaders in the DON knew where they wanted to go.

Having clear goals allows the development of strategies to achieve them. The strategies provide the roadmap for reaching your goals. The strategies you create should be developed in the context of the subject matter you are including in your E&T program. They should also take into account the realities and constraints of your organization. The DON train-the-trainer strategy grew out of the realities that there were limited resources and time available for reaching the quantitative goals of the program. The cost of establishing an in-

structional staff and facilities sufficient to provide end-user training to 150,000 critical mass members in five courses in less than six years was considered to be prohibitive. The train-the-trainer strategy was adopted because it had the potential to leverage limited resources to reach the training goal.

The content and purpose of your organizational change also has a major influence on your education and training strategies. The DON adopted a two-phase approach to TQL implementation. The first phase focused on selecting, educating and training a critical mass of 150,000 individuals to manage and improve mission-critical processes. The knowledge and skills required to accomplish this led to the learning objectives and the basic content of the DON TQL curriculum. TQL implementation in the DON was also leader-driven. Therefore, the overall focus of the curriculum was on phase-one implementation, while the sequencing of courses in the curriculum was top-down implementation of TQL in the DON.

The strategies you develop for reaching your education and training goals should take into account organization realities, the nature of the change being implemented, and effective education and training principles such as education before training, just-in-time skills training, and delivery of training to team members who will be working together in teams.

## The Design Team

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Having the right members on the program design team is critical. The team should include subject matter experts in the change or innovation being introduced, representatives from major departments involved in the change or innovation, a representative from the Comptroller's office, and a representative from the Training Department. This team should also have someone from that higher-level group to serve as a linking pin to the design team.

The design team should be provided with a clear charter or written set of guidelines stating the purpose of the education and training program, specific tasks to be performed and the scope or boundaries of the design effort. The first task of the linking pin is to explain and clarify the charter or guidelines for the design team. Since the linking pin is a member of the chartering body, he or she should have a clear understanding of what is required. The linking pin should also have the authority to restructure the design team to meet emerging requirements or to streamline the team if it has grown too large and inefficient. There should be a set of criteria established for membership on the team. The criteria should serve to ensure that the right members are on the team.

A major requirement for the design team is making membership a full-time assignment until the design task is completed. Members of



the team need to devote their full attention to the design task. They should be relieved of their normal work responsibilities during the time they are assigned to the design team. Not only will this reduce the time to design the program and implement the change, it will also demonstrate top leadership's commitment to the education and training program and the change it is being designed to support.

Some of the major tasks of the design team are to develop goals and objectives to support overall program goals, to develop the strategies (a plan) and policies of the program, to identify the target audience of the education and training, to determine what the courses in the curriculum will be, to determine who will design and develop the courses, what resources will be needed to establish and administer the program, how long the program will be needed, and who will manage the program. In summary, the program design team needs to address the questions of why, what, who, when, and how.

If the design team does not have sufficient subject matter knowledge of the change or innovation being introduced, they should be provided that knowledge in order to carry out their responsibilities effectively. Also, if team members have not worked together before, they should undergo some team-building training to enhance their performance as a team. One of the best ways to do this is to have a trained facilitator work with the team and the team leader, particularly in the start-

up phase of the design process. This helps the team leader (chair) focus on the content of meetings while the facilitator focuses on the process of keeping the team working effectively and efficiently.

A design team is not exactly the same as a process improvement team. A process improvement team works on processes that already exist. A design team, by definition, designs something that does not already exist. However, there are some significant similarities among the two types of teams. Membership is determined by ownership of elements in the process. Both teams develop a plan. They both must transform from a group of individuals to a team. They function as a team, observing certain procedural rules, they make decisions according to a specific set of decision rules, and they both work towards a common goal. A design team is usually disestablished after what they are designing is completed. A process improvement team continues to function at some level as long as the process still exists.

## The Design Process

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The process of successfully designing a large-scale education and training program depends on a number of factors. As mentioned above, you have to have the right team. They need to know where they are trying to go - they must

be given clear goals and have specific tasks to accomplish. They must have a minimum amount of subject matter knowledge about the nature of the change or innovation the training program is supporting. The design team must develop strategies and policies for the program. They must identify courses to be developed and identify the right development agents. They must provide clear guidance to the course developers to ensure consistency among courses and consistency with the change or innovation supported by the training. They must communicate in a timely and effective manner with higher authority to ensure they are going in the right direction. The design team must also deal effectively with any political agendas that exist with members of the design team. Their job is to optimize the design and operation of the education and training program.

What do you do if the above factors are not present? The leader (chair) of the design team should work together with the linking pin from higher authority to ensure that each of these factors is present and that they are working effectively. Below is a prescriptive list of some actions you can take to ensure your design team is working efficiently and effectively on their assigned task.

or process facilitation. The DON chose to combine these two approaches and included specific role responsibilities in more than one course. Whatever approach is used to design courses and a curriculum it should be based on a thorough analysis of the roles, responsibilities, and tasks to be performed by those who will have key roles in the change or innovation being implemented.

## PROBLEM

- 👉 Conflict between job on design team with “real” job
- 👉 Lack of clear direction
- 👉 Inappropriate team membership
- 👉 Insufficient knowledge of change or innovation to be supported
- 👉 Training strategies not matched to organization constraints/realities or to content of the change
- 👉 Courses identified by general topics only, not related to key roles or responsibilities
- 👉 Inappropriate course developers identified
- 👉 Courses not consistent with each other or the change concept being supported

## REMEDY

- 👉 Make assignment to design team a full-time job
- 👉 Get a charter or written guidelines from higher authority
- 👉 Establish membership criteria and reorganize
- 👉 Stop the process and get educated
- 👉 Get more education; change team membership; coordinate more effectively with higher authority through the linking pin
- 👉 Get more education, get help from subject matter experts and/or curriculum design experts, conduct appropriate job-task analyses
- 👉 Stay focused on need for consistency among courses and with the change concept; do not proceed with course development; reassign development agents
- 👉 Stop development; educate developers in the change concept; provide better guidance; bring developers together; seek their assistance in achieving curriculum consistency

## PROBLEM

## REMEDY

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| 👉 Too many “course corrections”           | 👉 Communicate, communicate, communicate; keep everyone informed, ask for more or clearer guidance from higher authority   |
| 👉 Suboptimization (too many “rice bowls”) | 👉 Don’t wait; get all the political issues in the open; refocus the team on its task; ask for help from the linking pin/higher authority; use a process facilitator |
| 👉 Team not functioning as a team          | 👉 Use a process facilitator; establish and follow team procedures   |
| 👉 Decisions revisited frequently          | 👉 Establish membership criteria and maintain stable team membership; adopt clear decision-making rules  |

The design process refers not only to the design of the strategy and program itself, it includes the design of the curriculum and the courses that comprise it. The curriculum should specify the recommended sequence for the courses and their prerequisites. The curriculum can be comprised of courses targeted to specific positions such as TQL leader, TQL coordinator, team leader, etc. It can be based primarily on broad categories of subject matter such as implementation planning, application of the scientific method (i.e., the PDCA cycle),

or process facilitation. The DON chose to combine these two approaches and included specific role responsibilities in more than one course. Whatever approach is used to design courses and a curriculum it should be based on a thorough analysis of the roles, responsibilities, and tasks to be performed by those who will have key roles in the change or innovation being implemented.

## Organization Structure for the Program

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Effective program management starts with establishing the right organization structure. In most cases the program will be under the administrative control of the Training Department or organization. If there is more than one training group in your organization you will have to decide whether the new group will be established to administer and manage the program. Putting the program under one of the groups may result in alienating the other training groups by giving one group too much control over the administration and management of the program. This could result in internal conflicts and disproportionate quota allocation among different segments of the organization. If your organization has different business sections or separate companies and you are implementing a change affecting the entire organization, make sure all segments are included in the education and

training program during its operation and any follow-on integration effort.

## Training Delivery

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The DON decided to design its E&T program using the standard classroom approach- lecture and facilitated instruction. This was chosen primarily because of the train-the-trainer strategy adopted by the ESG to deliver training cost-effectively and consistent with the DON TQL approach. Other advantages of classroom facilitated instruction are the benefits that come from interaction with the instructor and fellow students, and the hands-on experience gained in going through numerous exercises and case studies. Repetition and practice enhances learning.

If the DON TQL E&T program was under development today, it is very possible that technology would play a major role in training delivery. It might be used to augment classroom instruction and the train-the-trainer strategy. If your organization has widespread use of computers and your training department has the expertise, you should consider using technology to augment training delivery.

The initial cost of such an approach would probably be high, but the life-cycle cost of training could be lower than the traditional method of establishing





schoolhouses. Not only would the initial cost be high, but the time to develop technology-based training could be greater than developing hard copy training materials. Whatever approach is chosen, there will still need to be a way to manage the curriculum, i.e., to revise and update the curriculum, based on user feedback and evolution of the change or innovation being introduced. Technology could also allow widespread dissemination of training without incurring the cost of travel. Such training is sometimes known as distance learning. Thach and Murphy (1995)<sup>8</sup> describe how you can use traditional training approaches in distance learning if you match the approach with the technology and the learning objectives. Some of the benefits of distance learning are: lower costs due to lower travel expenses and time away from the job; access to learning when and where it is needed; faster delivery of time-sensitive training; and greater access to experts through on-line venues.

One form of interactive distance learning technology that is more widely available today than it was a few years ago is teleconferencing. This is a way to reach large audiences without high travel costs. This technology could be used in conjunction with interactive computer-based instruction for cost-effective training delivery. The choice of training delivery systems is yet another issue that must be dealt with by the program design team.