

ENGINEERING MANAGEMENT COURSE

January 24 - February 3, 1966

Managing the Use of Value Analysis
And Value Engineering Techniques

L. D. Miles

- I Establishing of course objectives
Understanding the "Value" environment
- II Understanding the technology being managed - I
- III Understanding the technology being managed - II
- IV Understanding the technology being managed - III
- V Understanding the present "Value" Climate
- VI Setting operating objectives
Organizing
Staffing
- VII Programming
Measuring
- VIII Communicating to others
Relations with other work
- IX Management Problems
- X Summaries and Conclusions

1966

DAY ONE

FAIR
They were not ready
for even a study
SW 1/2
done

40 man to
one Don Nelson
MY BOSS } OPEN DAY I, 1966
AT STAFF HQ THINKS

THERE IS SOMETHING IN THIS
THAT WILL HELP US ~~IN~~ IN THE
TIGHT MKT AHEAD - SO I'VE
INVITED YOU TO THIS ALL DAY
MEETING ON THE SUBJECT.

I THINK IT'S A BUNCH OF "STUFF"
NEVER THELESS LISTEN TO IT AND
DECIDE WHAT POSITION YOU WANT
TO TAKE ON IT.

AS A SEMINAR SITUATION - 5 DAYS

3 men pay business

ONE DEPT INSISTED ON A 5 MAN TEAM

HEADED BY THE ASST ENG MGR

(who attended only the opening
and closing hour of 5 days)

As contrasted -

1 Gen Mgr 100 men of 1000

~~HAD A CHA~~

ONE NEW DESIGN

CHANGE OF LIFE

600 MORE AS SOON AS PRACTICABLE

ANOTHER - BROAD RESP

15 min Apt at 4:30 pm

There until 7:00 -

said "Train 2000 -"

"TELL ME what you need to do it"

ASSIGN

1- EACH HAND IN WRITTEN ANSWERS
TO TWO QUESTIONS

- A - WHAT WOULD HELP ME MOST ?

B MY NEAREST BELIEFS NOW
CONCERNING IT (should have been feelings)

2 READ Chapter 1

I - 1966

HENNING
STUDENT
ASST.

ITS DIFFICULT TO "FEEL"
HAVE YOU GET WHAT YOU WANT -
HAVE YOU DEVELOP SOLID "FEEL" FOR UA

JAPANESE - GERMAN DUTCH

IDENT SELVES
WORK - HOBBY -

LDM - Sweden - ENGLAND THIS COUNTRY
CROISING

WASH DC -
OTHERS - IDENT SELVES
WHAT DO THEY WANT TO GET FROM IT
USE BLACKBOARD - TALLEY UP -

TONIGHT WRITE DOWN
WHAT WOULD HELP ME MOST

sign t

Assign
and
Read
Chop I

MY NEAREST BELIEFS NOW AS TO WHAT
CONCERNING IT.
one or two - England talk - report day 4 in 10 min.
ATTITUDE SCREENS

WHAT IS UA - ?
WELL - WHAT WAS THE NEED THAT GREW IT?

REQUIRE

- 1 feeling that lower costs req'd
- 2 belief " MUCH lower costs available
- 3 unit of measure - to indicate degree -

FIRST - unit

timer stud (start with stud)

switch blade (start with mountings -

Second
beliefs -

third feeling - comes from elsewhere -

ENVIRONMENT REACTIONS

"MEN OR BOYS"?

"WHY NOT BEFORE MOLDS"

HANDEE FEELINGS 75%
LEARN TO DO TECHNICAL 25%

1966

DAY II

EXCELLENT

Communication - Bear -

WHAT IT IS

THEN WHAT IT DOES

PICTURE MANY DAUBS OF PAINT
(VS 1 SWIPE OF BRUSH)

WHAT IS DIFF BETWEEN FIGHTING A FIGHT -
AND WINNING IT? A LITTLE BETTER TIMING
COACHING FOR CHAMPIONS - PUNCH TECHNIQUES
VALUE

VALUE (COST) WORK IS ART
IS EMOTIONAL PROBLEM

DEREDIT WHAT DON'T UNDERSTAND
FEELING OF FEAR OF EMBARRASMENT

WARM BLOOD

READ NEGATIVE COMMENTS

POSITIVE STATEMENT WHO LEARNED TECH

PROOF FOR MANAGER - OPERATING HEAD

EXTRA COST
←
TECH BOMB
←
STATUS
←
COLL Control
←
←
←

FUNCTIONAL

ASSIGN

4 PAPERS FOR DAY 3 # 5 MIN

1 PAPER " " 4 20 or 3 men - 10 MIN

VE IS LIKE

(FROM ARMY PAPER)

auto
plane
jet

Piano
Telephone

VE IS ARRANGEMENT OF TECH

MAKE CLEAR FUNCTIONS CUSTOMER WANTS

SWITCH BAR
RADAR SPOT FOCUSER
COLD CONTROL

ESTABLISH APPROPRIATE COST BY COMPARISONS

TIE - CLASP - BUTTON NAIL

SWITCH BLADE STUD & NUT 32 - TV SWITCH

REVIEW

SYSTEM FOR EFFICIENTLY IDENT UNNEC. COST

FOR THAT ONE PURPOSE ONLY

IF DONT NEED LOWER COSTS, DONT USE IT

IF YOU DO IT WILL GET THEM

MUST DEAL WITH FEELINGS

SINCE IT IS A DIFFERENT APPROACH

IT IS "FACT" AS AN ATTACK ON SECURITY AND

WILL BE BITTERLY OPPOSED BY PEERS AND

MANAGEMENT - EXPECT NOTHING ELSE

ADVANCED MANAGEMENT AND ENGINEERING COURSE

"THE MANAGEMENT OF VALUE ENGINEERING AND ANALYSIS"

PROBLEM SOLVING SET

INTRODUCTIONS

Information Step
Analysis Step
Creativity Step
Judgment Step
Development Step

This approach organized all resources for problem solving - whether large over-all or small - It is repeated until the needs of any situation have been met.

DESCRIPTION

Information Step

What is the starting point? What is known? What is believed? What is done? Why is it done? Where? By whom? When? For what cost? What are service factors? What are maintenance factors? What are other customer factors? Why done this way? What changes recently made? Etc.? Etc.?

100% information finding - no interpretation, no analysis, no idea generating now -- what are the facts? If not absolutely sure that a statement is true, write it as a "belief".

Analysis Step

What are the meanings? What are the total problems? The individual problems? The reasonable goals and plans? What are the key problems to be first solved? What solutions seem reasonable? What end result is reasonable? What steps--1st, 2nd, 3rd--are indicated? What additional information is required? Etc.? Etc.?

Creativity Step

More completely described elsewhere--hence not duplicated here.

Judgment Step

What approaches show promise, what are cost advantages of each? What are advantages and disadvantages? Which is ready now for development? Which should be referred back to another Information and/or Analysis and/or Creativity cycle? What disadvantage becomes the new problems? Etc.? Etc.?

Development Step

The "better answer" is usually 50% to 90% ready to use when it arrives here. Make it 100%. Get firm quotations, get material technical data. Make and test specific principles when necessary. Establish three alternative means of solving any remaining problem that appears difficult. Get others with different fields of knowledge to working on the key problem.

(Textbook "Techniques of Value Analysis and Engineering" - page 26, phases 5 and 6; page 31, items 5, 6.)

RELATIONSHIPS

All parts are interdependent.

Information is useless unless we have a plan to use it to meet a need.

Analysis is worthless unless we have an objective, a plan and valid and complete information.

Creativity is economically valueless unless we have a need, a plan, essential information, analyzed for understanding, stated as a precise problem, to be followed by judgment and development.

The benefits of judgment (if any) are limited by the substance which is to be judged.

Development is "busy work" unless the alternatives meet the need.

These five pieces constitute a "system" which experience has proven produce superior results.

This system will be repeated in many variations and accomplish surprising results for all of you.

DAY IIII

GOOD

~~removed copy of~~
~~"problem Solving Set"~~
removed

FAST EMPLOYER DOES NOT WITHHOLD COST RED.
ANY PROBLEMS OF A BUSINESS ARE IN AREAS OF
PRODUCT, COSTS OR SALES

PRODUCT? - FIX IT

SALES - - FIX SALES (method product competitive price)

COSTS - - FIX THEM

REGULATOR
NEED
ACTION
RESULTS

Beconselke
piano
people do
planning almost
every music -
but use only
parts needed on
a job

LIKE A PAINTING - MANY DAUBS OF COLOR -
REVIEW - SYSTEM TO ESTABLISH MEAS. OR INDICATORS
ALL BASED ON FUNCTION

FIRST IDENT. AREA OF NEEDED ACTION

" SHOW WHAT COSTS ARE REQUIRED

" WHEN NEC. GIVE APPROACHES OR
FIRST STEPS TOWARD THE RESULT

system - most old
some modified
~~new~~
A few new -

REQUIRE (a) THORO TRAINING

don't need a bush's jey a jet

(b) different environment -

WHAT IS MORE OF THE SYSTEM -

EA STEP BY STEP PURPOSE

DONT JUDGE 1 STEP

SURGEON

JUDGE RESULTS FROM PLAN - when patient is
sewed up.

Now

4 Reports

DEFINITION

1
2
3
MAKE - JOB SOLVABLE -- SOLVE IT
JOB PLAN

FUNCTION

ASTH
USE

BASIC
SECONDARY

GROUPING
REFINING

DISPOSAL

SOLVE
LATA TIME

GRIND	3	(2)	
ENERGIZE	8	(8)	
AMOUNT	1	(15)	
CONTAIN	3	(2)	
CONTROL	1	(1.5)	
ASTHETIC	1	(1)	
	<u>17</u>	<u>12</u>	

ASSIGN

chop III 3 6 7 8 9, 10, 11, 12
IV

peruse chapter 5

Book for 30 minute report on DAY 8

NEXT Tues Report Day 7 "measurements" - 5 min
VE IN A+D-

Inputs to a system must be crisp and right

- Generosities
- Costs
- Blast
- Creed

1966

DAY 4

VERY GOOD!

DAY 16 1966

PRODIGIOUS AMT - LAST DAY OF CONTACTS

4 STEPS LEARNING

Awareness	Recognition	Understanding	use
200	100	25	10

NEW ASSIGN

CHAP 6 - SHORT BUT UTAL

SOMEONE VE 17 RES - DAY - 5 MIN mon.

SOMEHOW MORE 2-4 hrs
 Book - ROPT significant
 or tell what was there and answer -
 DAY 8 - DPP 30 min
 TUES

REPORT ON VE IN ENGLAND

FINISH DISPOSAL FUNCTION IN AREAS

ILLUSTRATE USE - ASTHETIC

Refuge #10 23 mlts
 #5
 Got opportunity or worked for 5

TAKNOB

BASIC - SET DEGREE

80% of cost in set degree -

Refuge

water -

Naming Functions -

conduct current the use course

transmit torque -

new

function / property in

property / material in

material / cost effort

MUST BE AWARE OF POTENTIAL
1 & check
slashed
large sym motor
CANTED DECK CARRIER
ADM COWDREY

Military 3x reqd cost
Industrial 2x "

Consumer 25% higher -
~~EFFICIENCY IN USING~~ - mockingbird up down, side, back 170# mon 285# hamburger
NO relation between cost & price -
price mkt leads
Cost our skill in all matters -

Always negatives
costs too much to do
injure &
Hold up production -
increase maintenance
Destroy reproducibility -
Require impossible tests

Always overcome stoppers
Generator or job
shaft
hole
outside mach
waterwheel mount
conductor -
brq cooling system

ALWAYS FACTS + ASSUMPTIONS -
COLD CONTROL -
Funct areas
contain
COVER
mech motion -

"one of mags asked to have work stopped" shows mgt problems

LOW V, PROCESSES service organization
Gillespie Asbestos Engrg

ALSO SHOULD TOUCH
13 TECHNIQUES



PRODIGIOUS AMT OF MATL TO COVER TODAY

4 STEPS OF LEARNING

40 hrs
6 hrs

AWARENESS, RECOGNITION	UNDERSTANDING	USE
200	100	10
(shaft) Eval scient " Postcomp " abstract comp " usefulness	JOB PLAN weight compl	System water <small>old, modified, new part</small> nature of factors
Particle An some courses for H cost	<small>some</small> causes for H cost	How to staff system " " Measure " " " " Men where to use system when " " "
Nonung fact	Evolution	Blast tech -
Main- second	use- aesthetic B-c blocks	Human part
Stoppers everywhere <small>stop info</small> <small>stop study</small> <small>stop information</small> my change affects security	Process Service one shot organization	How Results achieved by Techniques -
New approaches come CP user reqd -	Training reqd	Environmental reqd
Requires ≡≡≡	More problem soluble	use exact problems
ad of multiple functions honest wrong beliefs -		

1964

II
DAY 5

QUITE GOOD
A LITTLE EXOTIC

5 pages taken from Day 5

DAY 5

quite good probably
nature of management
but quite hard.

WIND UP WHAT IS VA OR VE SYSTEM

PREPARE FOR - ~~HOW STAFF IT~~

HOW ORG. IT
HOW STAFF IT
HOW MEAS IT

GIVE OUT

"APPROACH + PHILOSOPHY OF VE + VA"

DISCUSS

"METHODS USED IN VE + VA"

DISCUSS

"TECH. OF VA + VE"

DISCUSS

NOW TEST FOR ARMY TEXT

ASSIGN 2 PAPERS

FUNDAMENTALS OF VE

NEW - WILL BE GIVEN IN APR

5 min review wed

Understanding mgt of
VA + VE

Just prepared for Army -

5 min review thurs

FROM TEXT - ~~NOT~~

184-190

Chapp 9-10-11

tomorrow no Assignment from text

VALUE ANALYSIS DARES TO DEAL WITH REALITY

- 1 - 1/2 of the decisions are not heavily influenced by objective data.
- 2 - 1/2 of the people are not accomplishment oriented or motivated.
- 3 - 1/3 of the actions are not the result of an independent thinking analysis.
- 4 - 1/2 of the work is not being done the way the people on the job believe it best.
- 5 - Reports do not show realities

Reports are by instruction

A certain length

A certain format

Include certain things (necessarily exclude others)

- 6 - Every report must as carefully as possible conceal deficiencies as they would be interpreted by higher levels as critical to the report writer's boss.

When this kind of objective thinking can temporarily control the thought environment as in a Value Analysis Seminar or Task Force, of course, twenty to forty per cent of cost can readily be identified to be unnecessary... but the most stalwart leaders, who have created, and flourished in, the past environment won't like it--and will, as soon as politically expedient, purge out this new thought freedom and, with the purge, any significant believers.

II. Solving the Problem

The Job Plan.

Now with the basic functions to be accomplished in mind, with a good understanding of precisely the degree and under what conditions each is to be accomplished, with a good basic consideration of the objective situation, with an idea of the precise specific problems which, if solved, would provide lower cost, better solutions, the five step approach of the Job Plan is used. This approach organizes all resources for problem solving, whether the problem is large and involved or small and specific. The steps of the Job Plan are repeated until the needs of any situation are met.

Step 1 -- Information step.

What is the starting point? What is known? What is believed? What is done? Why is it done? Where? By whom? When? For what cost? What are service factors? What are maintenance factors? What are other customer factors? Why done this way? What changes recently made? Etc.? Etc.?

100% information finding -- no interpretations, no analysis, no idea generating now -- what are the facts? If not absolutely sure that a statement is true, write it as a "belief".

Step 2 -- Analysis step.

What are the meanings? What are the total problems? The individual problems? The reasonable goals and plans? What are the key problems to be solved first? What solutions seem reasonable? What end result is reasonable? What steps -- first, second, third, -- are indicated? What additional information is required? Etc.? Etc.?

Step 3 -- Creativity step.

The vital process of creative thinking has been given the treatment it deserves and requires by Alex Osborne and associates during the past fifteen years. Books and training are available to the reader, hence will not be elaborated here. It proceeds by jelling up the precise problems which require better answers, then by deferring judgment, establishes many new relationships between elements of pertinent knowledge. Its definable and teachable procedures result in far more effective thinking toward the solution of the problem.

Step 4 -- Judgment step.

What approaches show promise, what are cost advantages of each? What are advantages and disadvantages? Which is ready now for development? Which should be referred back to another information and/or analysis and/or creativity cycle? What disadvantage becomes the new problem?

Step 5 -- Development step.

The "better answer" is usually 50% to 90% ready to use when it comes out of the "Judgment step". Make it 100%. Get firm quotations, get material, technical data. Make and test specific principles when necessary. Establish three alternative means of solving any remaining problem that appears difficult. Get others with different fields of knowledge to work on the key problems.

Recycling.

Specific problems which, when solved, will allow significantly better cost oriented decisions, have now been brought into clear view. The Job Plan has been used. As a result of the Creativity and the Judgment, solutions which would be excellent excepting for one or two specific precise details have been found. These precise points then become the new problem and are recycled through a problem solving Job Plan.

End generalities.

It has been found that probably the greatest reason for stopping beneficial cost oriented decision making is the general statement. General statements must be given "zero" credence. What is the specific situation? What precisely does this do? Under what precise conditions? Precisely how often? Precisely what metal did not work under precisely what conditions? Generalities maintain the status quo. Specifics support new and better solutions.

Recognize and end roadblocks.

The definite and proper treatment of roadblocks is just as vital as the proper treatment of the technical factors involved. One roadblock or stopper anywhere in the entire process can greatly reduce or end the possibility of results. These roadblocks or stoppers appear in securing and understanding of the problem, in securing information, in learning what the customer really wants, in learning how to bring the best out of specific materials or specific processes, in getting good, creative ideation, in getting samples, in getting tests, in getting interpretations of test material.

Roadblocks which stop the small, individual steps are just as damaging as the roadblocks which stop approval. Each must be recognized and dealt with in a manner that ends or minimizes its destructive potential.

TELEPHONE
MELROSE 9-4411
(AREA CODE 317)

Manger
Motor Inn

GE.

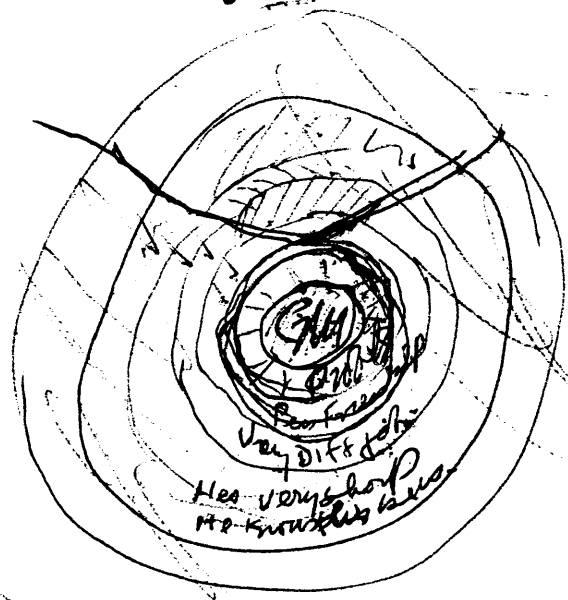
IDEAS

1530 N. MERIDIAN AT 16TH STREET • INDIANAPOLIS 2, IND.

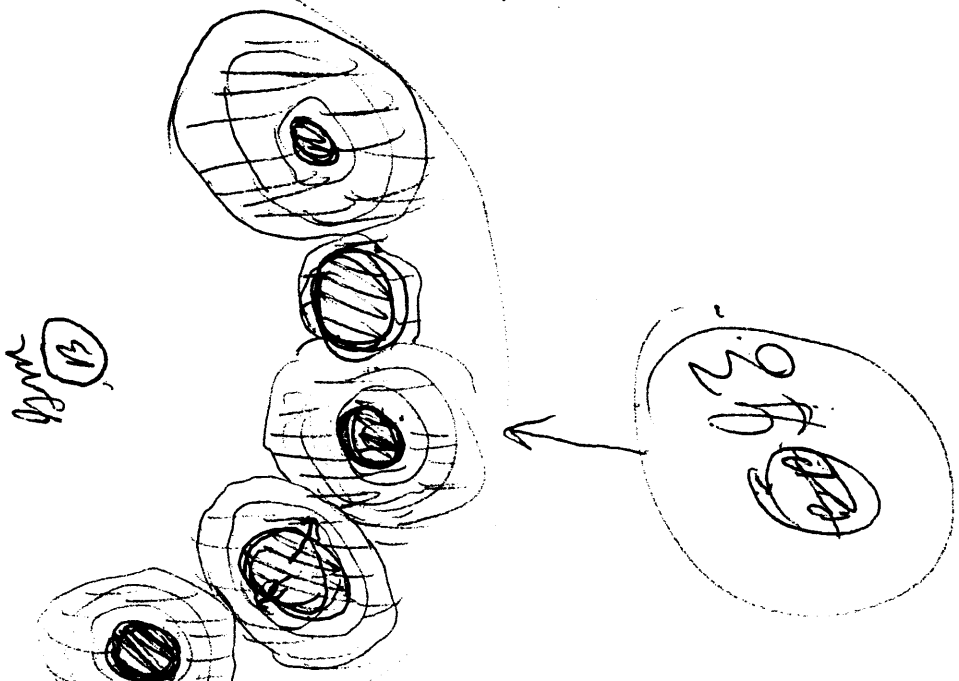
DIU

100-
75-

Easier to make the inner better



Results
VY open handed
VY keen
VY diff task
Anyone else
would do worse



ALBANY, N. Y. CHARLOTTE, N. C. CLEVELAND, OHIO INDIANAPOLIS, IND. NEW YORK CITY
PHOENIX, ARIZ. ROCHESTER, N. Y. SAVANNAH, GA. WASHINGTON, D. C.

Seminar cost was \$30,000 -

cost removed \$75,000 - but cost prevented
from next production \$50,000

psycho reasons for cost -

~~Trainers not as necessary~~

Beginner's leadership of thinking -

Importance of right climate

~~Write function as to answer~~

3 ways as decision criteria

what is myt enment -

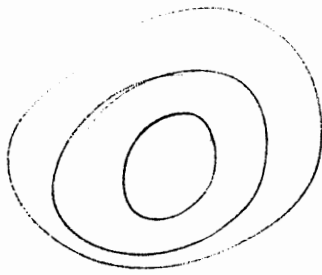


image to boss

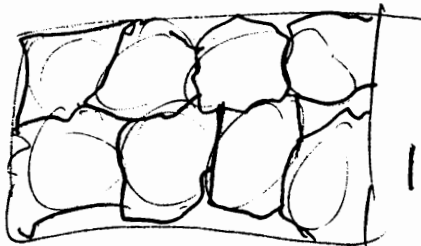
2 Protect Boss




3 org structure } different
power structure }


4 medium ability down - protect each other
only change frequently -

5



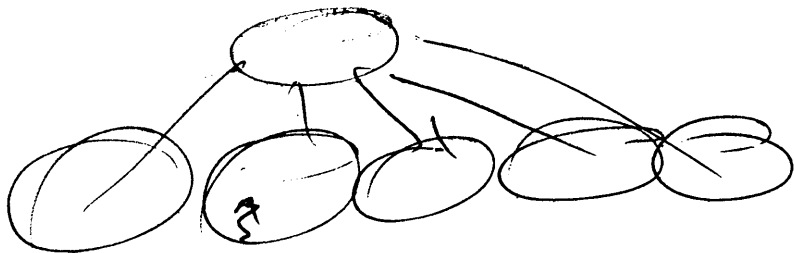
dynamic force system

1)  new where to put him

2)  learn really new } 11
skills -

GREAT

6 a Pain of failure



Failure hurts image
hurts boss' image -

Conclusion - From "X" FILE

President's concepts

MANAGING THE USE OF VALUE ANALYSIS AND ENGINEERING TECHNIQUES

Class No. 18

L.D. Miles

(D R A F T)

VALUE ENGINEERING

Summary Statement

Value Engineering is one of the newest methodologies available to management. Its purpose is the efficient identification of unnecessary cost. It is a system which delves to the root of function and then devises the simplest, easiest and least costly ways in which the essential function can be performed. Its targets are products of all kinds, services of all types, and the procedures employed in providing them. Its potentials for cost reduction and increased effectiveness of performance are universally accessible.

asked them
for approval on
change of this
definition

July 6
9002

1966

1

TYPE OF SITUATION

Small or Large
govt or industry
type of work
type of org
who wants it?
why does he want it?
who now does part of
work?
who now believes he is
expected to do CR
or prevention?
where now report?
what size?
what do men do -
Have other duties?

OBJECTIVES

SAVE money?
Help who?
How much?
Help who - How much?
what will be their
output?
what help in
preparing officers?
what help in
supporting off?
what help in
communication?
should they cover
communication?
training?
project help?
consultation?

Organization

How many?
what structure (parallel)?
Report where
Instructed by whom
meas by whom -

Staffing

Quality
Training
where find them
How work relation to each other

Some examples
asking Q
what did he do -
Eng IT?
mfg IT?
Prog IT?
Other?

Day 7

Feels good -

Took away

"Environmental

Realities"
for typing

Day 7

1966

definition papers -

Assignment -

chap 7 - 8 -

make

20 Questions - like clarified

P. LAY out work to do
AS given out -

set dates for it to be done
means whether it is

Show JFP meas sheet

Tell of

project w -
ed -
cons -
communication

{ Budget ea
meas ea }

Call for Paper to be reported Day 7

President's Concepts

1st $\frac{1}{2}$ Good
2nd $\frac{1}{2}$ Poor

Day 8

DAY 8 1966

ASSIGNMENT

~~WRITE 5 REASONS WHY~~

VE PROCEEDINGS - (2) SCAN - COMMENT TOMORROW IF APPLICABLE
FROM BOOK (AMN) FOUND PERTINENT IDEAS LIKE TO
COMMENT TO MORROW?

REPORTS -

R+D

USE VE ON OTHER THAN PRODUCT

COLLECT TAXES

#

medium

function

POLICE SERVICE

CHECK DOORS

SCAN STREET

INDICATE LOCATION OF CARS

DEPT OF HEALTH

FUNCTION OF NURSE

WHAT DOES SHE DO

FUNCTION OF OTHERS

WHAT DOING?

MISFITS?

CREATIVITY

KNOWL

ABILITY TO ASSOCIATE

DAY 8 1966

: 7

Communication -

what is req'd -

STARTING

TO WHOM?

what?

- Value news - , Example cards, new methods news.
" UNDERSTANDING IS WHAT MAKES EXPERIENCE
MEANINGFUL. "
" UNDERSTANDING CANNOT BE 'PRESENTED' "
" " NOT NECESSARY IF NEED IS GREAT ENOUGH "

BOSS? PEERS? - OTHERS

RELATIONS

WHAT ARE PROPER RELATIONS

TO PRES

~~MAN - BOSS~~

ENGR

MFG

PURCH

SALES

did not communicate well

DAY 9

EXCELLENT

DAY 9 1966

Tomorrow
Glen Hart
HENRY PARDO

your witnesses' - ASK them anything
your available contacts in this area -

GIVE OUT "DECISION MAKING" STUFF

- 1- THEM READ IT
- 2- GIVE EXAMPLES

CREATIVITY - debered judgement
free wheeling - no neg -
what might we put on the table -
associate knowl Diff way -
No - again - items not usually put on table -

IDEA DEVELOPMENT
HANG IT WITH ROPE

Honest wrong beliefs -
curbs etc
weld segment

Report fundamentals of VE

" if any on book

if any on some proceedings -

Questions -

GIVE OUT "one meas system"

GIVE OUT Rating Sheet

NOW YOU ARE knowledgeable - you answer them

DAY 9

GOT TO DO

- 1 report
- 1 save mints - report if adds
- Grade 4 & 5

Give out mgt problems -

Give out

LIKE TO -

Tell some stories

Honeywater Rept

Blind people

Insulation - #16 - 6¢

Born Street Site

weld segment

Kirk's ties

EDISON 7 yrs -

Dust cover?

Sales maps Hot points

cry all the way to the bank

Show - eat 20,000 to correct error
(some 400,000 on other items)

Transp - glass breaker

Applying to paper waste
charic Bills

Rules -

V.A. IN FOOD INDUSTRY ?

cooling
stirring

(Chem - mills - ~~over~~ tanks - etc.)

DAY 10
1966

Quite Good

From 1963

HAVE WE THE SOLID BASIS FOR
WHAT IS NEEDED?

INTRO

H. PARDO

GLEN HART

PAPER - FUND - & VALUE
" MAT OF VALUE

DISCUSS ONE YEAR SYSTEM

FROM PRESENT VIEWPOINT

DISCUSSION

ANY SUBJECT

WITH ANYONE

INC. HP & GH

IMPORTANT THAT WE COME AS NEAR
AS POSSIBLE TO PROVIDING TO YOU
WHAT YOU NEED -

HOW CAN WE HOME IN ON IT CLOSER -

class

	1	2	3	4	5
	1				
	1	5	5	6	1

Section

	1				
	2	6	6	3	1

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

Class Value Engineering & Analysis

Please do not identify yourself in any way

1. What did you like about the content of this class?

~~The~~ The handout present were very informative and helpful.

2. What did you not like about the content of this class?

The subject matter was quite repetitive and the course could be shortened if no additional material is added.

3. What did you like about the instructor?

An excellent instructor whose manner of presentation was very good.

4. What did you not like about the instructor?

N/A.

5. Comparison with 25 other Engineers and Technicians Course classes and Instructors, I would rate

Please check:

	1	2	3	4	5
This class			X		
Value Engineering			X		

Please return this form to the instructor of this course.

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

Class Value Analysis

Please do not identify yourself in any way

1. What did you like about the content of this class?

Excellent development of the subject

2. What did you not like about the content of this class?

3. What did you like about the instructor?

down to earth, world of experience

4. What did you not like about the instructor?

In conjunction with my other Marketing and Management Course classes and assignments, I would rate:

Please check:

	1	2	3	4	5
This class		X			
of my assignments		X			

Please return this page promptly to the instructor in class.

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

Class Value Analysis + Engineering

Please do not identify yourself in any way.

1. What did you like about the content of this class?

New concept to me

2. What did you not like about the content of this class?

Too long
Student reports on outside reading assignments

3. What did you like about the instructor?

Sincerity + very likeable personality

4. What did you not like about the instructor?

Nothing. - A real gentleman.

In comparison with my other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1 (best)	2	3	4	5	6
This class			X			
This instructor		X				

PLEASE RETURN THIS FORM DIRECTLY TO THE INSTRUCTOR CONCERNED.

Class MANAGING THE USE OF V.A.

Please do not identify yourself in any way.

1. What did you like about the content of this class?

THE CLASS TEXT WAS WELL ORGANIZED AND VERY PERTINENT. THE CONTENT OF THE COURSE WAS SOMEWHAT LESS ORGANIZED THE FIRST FEW DAYS.

2. What did you not like about the content of this class?

THE CLASS STARTED VERY SLOW. I FEEL MORE ENTHUSIASM COULD HAVE BEEN DEVELOPED USING SPECIFICS, EXAMPLES, AND TECHNIQUES EARLY AT THE FIRST.

3. What did you like about the instructor?

HIS FRANKNESS AND DIRECTNESS BACKED ^{UP} BY EXAMPLES PUNCTUATED HIS PRESENTATION

4. What did you not like about the instructor?

HE GOT OFF TO A SLOW START. THIS COULD BE ATTRIBUTED PARTIALLY TO IT BEING A LATE AFTERNOON CLASS.

In comparison with my other Engineering and Management Course classes and Instructors, I would rate:

Class rank:

	1	2	3	4	5
This class				X	
This instructor				X	

Class MANAGING The Use of VALUE ANALYSIS

Please do not identify yourself in any way

1. What did you like about the content of this class?

the many examples and exhibits further explaining important points.

2. What did you not like about the content of this class?

Not enough specifics. I guess as an engineer I need my mind jogged to keep it from thinking in figures (such as $2+2=4$) rather than values.

3. What did you like about the instructor?

His knowledge of the subject. You could tell he believed in what he was saying.

4. What did you not like about the instructor?

Nothing

In comparison with my other Manufacturing and Management Course classes and Instructors, I would rate:

Please check:

	1	2	3	4	5
This class			X		
This instructor		X			

Class Value Engineering - M. Tes

Please do not identify yourself in any way.

1. What did you like about the content of this class?

Interesting concepts

2. What did you not like about the content of this class?

Too much on electrical equipment manufacturing.
Too little on broader application of principles

3. What did you like about the instructor?

Pleasant and agreeable

4. What did you not like about the instructor?

His resistance to talking about broader fields such as construction, maintenance etc. Possibly because he lacked personal experience^{there}, but there are many articles available.

In comparison with other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1	2	3	4	5
This class				✓	
This instructor				✓	

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

Class Value Engineering

Please do not identify yourself in any way

1. What did you like about the content of this class?

It covered the subject quite thoroughly for the time allotted.

2. What did you not like about the content of this class?

I felt that workshop sessions would have been useful. I.E. this could be accomplished with the instructor acting as the lead VE Engr.

3. What did you like about the instructor?

Receptive to class questions
Enthusiastic about subject.

4. What did you not like about the instructor?

No comments

In comparison with my other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1	2	3	4	5
This class			✓		
This instructor			✓		

Class Managing the Use of Value Analysis

Please do not identify yourself in any way

1. What did you like about the content of this class?

I appreciated the techniques of applicability presented with the subject.

2. What did you not like about the content of this class?

I suppose being an Industrial Engineer I am sensitive about disparaging remarks concerning our efforts in this field. It seemed to me the thoughts presented were well taken but should not require 15 hours of class. Many thoughts were basic to my I.E. college training.

3. What did you like about the instructor?

Informal & well informed, enthusiastic, and helpful.

4. What did you not like about the instructor?

Presentation was extremely slow. Subject presentation seemed vague in many spots. I must admit, however, that he pulled several loose threads together nicely on the next to last meeting.

In comparison with my other Engineering and Management Course classes and Instructors, I would rate

Please check:

	1	2	3	4	5
This class					✓
This instructor					✓

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

class 18 MANAGING THE USE OF VALUE ANALYSIS

Please do not identify yourself in any way.

1. What did you like about the content of this class?

COULD BE VERY APPLICABLE IN OUR CO.
WELL DESCRIBED & PRESENTED.

2. What did you not like about the content of this class? —

3. What did you like about the instructor?

SUCCESSFULLY
HE HAS DONE IN
PRIVATE INDUSTRY THE THINGS HE IS
TEACHING.

4. What did you not like about the instructor? —

In comparison with my other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1 (best)	2	3	4	5	6
This class		✓				
This instructor			✓			

PLEASE RETURN THIS FORM DIRECTLY TO THE INSTRUCTOR CONCERNED.

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

Class MANAGING THE USE OF VALUE ANALYSIS

Please do not identify yourself in any way

1. What did you like about the content of this class?

Its potential application to consumer products

2. What did you not like about the content of this class?

Did not cover sufficiently the application of VA to military and/or R&D Programs

3. What did you like about the instructor?

Use of numerous graphic examples.

4. What did you not like about the instructor?

I think the level of presentation may have been a bit low.

In comparison with my other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1 (best)	2	3	4	5
This class				X	
This instructor			X		

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

class 16 Managing the use of Value Analysis

Please do not identify yourself in any way.

1. What did you like about the content of this class?

Too much reading

2. What did you not like about the content of this class?

Presentation was defensive in nature with respect to VA. I would have liked more information on the detailed use of VA than how to defend VA.

3. What did you like about the instructor?

Was very effective in his presentation and made good use of comparisons

4. What did you not like about the instructor?

In comparison with my other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1 (best)	2	3	4	5	6
This class			3	X		
This instructor		X				

PLEASE RETURN THIS FORM DIRECTLY TO THE INSTRUCTOR CONCERNED.

ENB+MGT. COURSE 18
Larry Miles

VALUE ENGINEERING -

gone from the horse's mouth

Practical illustrations
class and guest participation

		X		
		X		

INSTRUCTOR'S CONFIDENTIAL CLASS EVALUATION

Class Value Engineering - 18

Please do not identify yourself in any way.

1. What did you like about the content of this class?

Excellent material

2. What did you not like about the content of this class?

nothing

3. What did you like about the instructor?

Did excellent job in presenting the material

4. What did you not like about the instructor?

nothing

In comparison with my other Engineering and Management Course classes and instructors, I would rate:

Please check:

	1 (best)	2	3	4	5	6
This class	✓					
This instructor	✓					

PLEASE RETURN THIS FORM DIRECTLY TO THE INSTRUCTOR CONCERNED.

Class 18 Managing the use of Value Analysis
Please do not identify yourself in any way

1. What did you like about the content of this class?

The material was presented in a very interesting way. The use of examples throughout was very enlightening.

2. What did you not like about the content of this class?

The subject was so new to me I cannot at this time evaluate what, if anything, was distasteful about the content. Since ~~everything~~ everything was presented so enthusiastically I doubt if there is any dislike.

3. What did you like about the instructor?

Very enthusiastic!

4. What did you not like about the instructor?

Nothing.

In cooperation with my fellow Instructors, and the program source material and materials, I would rate

Please check

	1	2	3	4	5
This class				✓	
My instructor			✓		

Class 18

Please do not identify yourself in any way

1. What did you like about the content of this class?

- A. Unlimited first hand accounts of incidents that backed up your teachings.
- B. This gives me a new tool to add to those already in use by my department (Eng Dept.) I conclude that the value engineer in my dept will be a specialist not unlike that of a Ph.D. Physicist - but much more functional.

2. What did you not like about the content of this class?

Repetition - But I accept the fact that this will be the road to ready access to the principles of Value Engineering. I won't have a good grasp of the tool until I have reviewed and used the tool many times.

3. What did you like about the instructor?

Very objective and very perceptive but never bowing - except to make a point. i.e. Yes, you are right! I am not infallible - only perhaps 90% right all the time - and with an implication that we could all do as well - if we try - very humble but firm.

4. What did you not like about the instructor?

Nothing -

In comparison with any other Value Engineering and Management Course classes and lecturers, I would rank

Class check:

	1	2	3	4	5
This class	1				
This instructor	1				

Class: 18

Please do not identify yourself in any way.

1. What did you like about the content of this class?

It called attention to a method that can help produce a good product at a lower cost. I probably obtained more value from this course than any other.

2. What did you not like about the content of this class?

The material covered could have been done in a shorter time. It was very repetitive.

3. What did you like about the instructor?

He made a sincere effort to cover the subject and do us some good.

4. What did you not like about the instructor?

He was very repetitive.

In comparison with my other Engineering and Management Science classes and instructors, I would rate:

Class check:

Class					
This class					✓
Other Instructors					✓

Class 19 - Managing the use of Value Analysis

Please do not identify yourself in any way

1. What did you like about the contents of this class?

Possibility of being able to use this new technique in my company

2. What did you not like about the contents of this class?

Little to go into in application

3. What did you like about the instructor?

Knows the subject extremely well

4. What did you not like about the instructor?

In comparison with my other Manufacturing and Management Course classes and lecturers, I would rate:

Class rank:

	1	2	3	4	5
This class		✓			
This instructor		✓			

HARRY E STAHL

1. What would help me most in my present job:
 - a. How can VALUE ENGINEERING & ANALYSIS principles be applied to the MAINTENANCE & REPAIR function of a Civil Engineering Organization on a UNITED STATES AIR FORCE BASE?
 - b. In the application of these principles how can they be utilized as COST REDUCTION PROGRAMS?
 - c. Is a special organization required in ESTABLISHING a Value Analysis & Engineering function, PARTICULARLY UNDER MILITARY ORGANIZATIONS?
 - d. What would be the best techniques for making both military and civilian (Civil Service) workers aware of what VALUE ENGINEERING is, and the benefits which could be gained from it?

2. My nearest belief in what is VALUE ENGINEERING, is a method of developing a product or system within a set of parameters and specific quality controls AT THE LEAST EXPENSE.

How to make VE work

1. Recognize that companies are different in attitude
2. Some are creative, dynamic, ready to make change and by the way, make a lot of money & grow fast
3. Other companies are very steady and staid, and not too venturesome. They make money too! But they don't grow as fast, maybe they are already as big as they want to be and just stay there
4. The difference between companies #2 & #3 means that #2 will accept VE fast (but, paradoxically, they don't need it as bad as #2 ~~and~~ ~~they, therefore~~ because they were more creative in the beginning) #2 needs it badly, but won't readily accept it unless there is a key man that understands people and can slowly apply it in ~~a~~ a way that ~~does~~ does no damage to people
5. The conclusion ~~to~~ is that companies have personalities equal to the norm of the personalities of

the people that compose it.

You should expect this and cope with it accordingly. You will show more savings (total), but over a longer period of time in company #2 as opposed to No. 3,

FRANK S. JASEN
25 JAN. 1966

Value Engineering.

I believe that Value Analysis/Engineering is a process or technique for the optimization (either in cost, quality or usefulness) of a product or end-item. This process involves the analysis and selection of approaches from a number of alternatives.

What would help me most: - I manage a (satellite) program charged with integrating a group of basic research/scientific experiments into a space vehicle and then injecting the spacecraft into the aerospace environment to be investigated. I operate ~~at~~ under a rather tight fixed budgets and schedules. Certainly, I'm concerned with lowest costs

and high quality but I am even more concerned about getting maximum usefulness from the final end item --- i.e. integrated experiments/spacecraft.

Scientists are prone to ask for the world when being supported. On the other hand I must insure that the basic spacecraft are not degraded so they cannot meet their basic functions --- i.e. survive in space & transmit scientific data to the ground.

Consequently, I need means or technique of being able to value analyze such alternatives ~~that~~ that pertain to the overall usefulness of the complete/overall end item. For example, should I spend my limited funds on providing the

scientist with slightly more data, or in improving his experiment capability; or should I channel my funds into spacecraft engineering items that only add \$ to the vehicle reliability.

Finally - since a contractor must perform the program development tests, how can I assess that he is using Value Analysis/Engineering in the more accepted sense -- i.e. minimizing cost & maximizing quality of the end item

1-25-66

My nearest belief now of what VA+E is, —
I had not heard of VA+E as such, prior to this
course.

What would help me most
application of VA+E concepts to materials handling,
screws, belts, elevators, etc

B. F. Payne

RALPH HARRIS

BETTER UNDERSTANDING OF ORGANIZATION
AND PROCESSES TO INCREASE EFFICIENCY
AND REDUCE PRODUCT COST.

MY PRESENT UNDERSTANDING OF V.A.
IS ESSENTIALLY ZERO

Ron Compton

What would help me most in a course on V.A.?

- ① A basic understanding about, what is Value Analysis? What are the techniques involved?
- ② How may the techniques of Value Analysis be applied in the R and D phase of a product without interfering with the performance and schedule goals of that phase?
- ③ What approaches are available for introducing Value Analysis into a company from a middle management level?

What is my nearest belief now about Value Engineering and Analysis?

Before coming to this course my only contact with VA was by word of mouth. I have come to believe that VA was the process of applying System Engineering techniques to Cost Reduction.

By System Engineering techniques I mean:

1. Define the problem
2. State the objective
3. Determine the decision criteria
4. Synthesize various alternatives
5. Analyze these alternatives
6. Choose the "best" alternative

Dave Davison

1-25-66

1. My nearest belief now of what value analysis is: -

A re-examination of unit function and design in terms of incremental cost reduction - quality, overall functionalism, and other physical attributes remaining constant.

2. What would help me most: -

It might be possible to apply these techniques to human analysis for performance measurement. If there are thoughts along these lines I would be interested in hearing them.

W.R. Kelly

My nearest belief now of what Value analysis is?

To analyze the value of an object by studying the functions of the object separately

What would you like next.

To be able to analyze the functions of jobs.

Dan Cook

Managing the Use of Value Analysis

1. VA and VE - The identification and elimination of unnecessary cost without effecting the quality or uses of the product.
2. What would help me most.
 - a. what is it?
 - b. How do you apply it to Air Force activities?
 - c. How do you differentiate between actual and apparent benefits?

My belief was that what VA is:

to improve the business and control in
the field of minimum without lowering the
standard of specifications
required specifications

What would help me most:

If we can supply VA to new product

developed 1000 miles from the engineering

department and manufacturing plant? We

could not participate, build plants,

initially test in California. Field testing,

engineering, industrial engineering and

manufacture to time in other.

Value Analysis & Engineering

Jim Holman

1. What I expect to get out of the Course?

An understanding of value analysis. At the present time, I do not know anything about it. It could be that I presently practice it to a certain extent, under a different title.

2. What is my nearest belief of value analysis?

A study of improving - either cut cost without cutting quality. ~~side work.~~

3.

Waite, R. S.

Value Engineering 18

I Belief concerning Value Engineering:

a quality measuring superiority of the engineering effort, which encompasses accomplishment of the objective; simplicity of the design with benefits to reliability, time of fabrication, and flexibility of application; resultant ~~minimization~~ minimization of overall cost measured not only on the short range but in durability and appearance (esthetic)

II The Greatest help to be obtained from the Value Engineering Course for me, would be to application of the principles to non-production design where engineering time is often the most expensive commodity. Use of expensive materials and fabrication procedures may result in 100% reliability, relieving the engineering task of redesign and configuration control documentation associated with continual rework effort.

1. My nearest belief now of what VE/VA is.

A. As I understand V.E., it is a formal technique for obtaining a specified level of performance at minimum total cost.

2. What would help me most?

A. I would like to clearly understand the answers (if there are answers) to the following questions

1. How should the V.E. function be integrated into an organization to achieve maximum return on the effort. I have had personal experience with a V.E. effort set up as an engineering responsibility. This is not a good arrangement.

2. What is the best manner of V.E. Documentation. That is, how do you eliminate the feeling that V.E. documentation is slanted to ~~show~~ prove inflated ~~claims~~ claims for the VE effort.

1/25/66

Class 18

"Managing The Use Of Value Analysis"

Question ① My nearest belief Now of what V.A. is:

Determine function(s) of item studied and their true costs. Seek other ways of doing the function at the lowest possible cost without reduction of reliability and quality.

Question ② What will help me most in material reviewed, presented and discussed.

- a) Principles and philosophy of this technique.
- b) How to obtain support and utilization of this technique by participants in (in-plant) programs.
- c) Reference and source regarding successful application of this technique in the food and packaging industry.

Bruce J. Rutherford

Question - My nearest belief now of what V.A. & U.E. is?

Answer An orderly approach to evaluating return or related to cost.

Question - What would help me most?

Answer - Practical application of V.A. to current cost reduction problems on a day by day basis in food processing where major costs are raw material and minor costs are in processing.

Granblain

1. My present belief of what Value Eng is

Emphasizing techniques for evaluating performance in terms of Quality, Reliability & Cost to help achieve the best balance.

2. What would help me most.

Desire to use value engineering in evaluating systems that will improve the potential performance of wood in construction. (e.g. floor systems for low rise apts) at equivalent or lower cost.

How can value eng techniques assist in such evaluation? especially during analytical phases of systems development since only the most promising systems should be actually tested.

Techniques of Value Analysis and Engr.

What I want from course

1. A logical process of applying VA/VE in the design / development / production phases of an engineering program.
2. Knowing when to apply
3. Knowing how to accomplish with minimal organizational changes and personnel (VA/VE Team) costs.
4. Knowing how to accomplish with minimum disruption to the organizations ultimately involved in applying the results of the VA/VE decision, e.g. production or D.C.

What is VA/VE to me

VE/VE is a systematic process of evaluating elements of cost in a product with the end goal of reducing these costs while, ^{still} maintaining the original intent and goals of the product.

R. L. LAUTZENHISER
HUGHES AIRCRAFT Co.

J. O. Bryan

1. Value analysis is an approach which includes a methodology to determine the optimum expenditure for necessary to achieve a specific quality in a manufactured product. In another sense it could be construed to mean a problem solving technique to achieve value received for value expended.
2. My expected result of taking the course is to give me yet another approach to problem solving. It is not possible at this time for me to state the particular part or parts of this problem solving approach which will dovetail with my particular area of interest. As an Air Force Officer at least 75% of my time is devoted to problem solving which involves men, materiel and equipments.

What I think VA is:

1. A technique of design for minimum cost at optimum effectiveness.
2. Applying cost reduction as a major consideration in system design and development.
3. Application to cost of producing a manufactured item.
4. Applies to improved ~~effectiveness~~, maintainability and serviceability costs as well as design development and manufacturing costs.

What would help me most?

1. How can I properly evaluate value engineering change proposals.
2. How can I relate V.A. to interfaces.
 - a. Can I compromise effectiveness, reliability, maintainability? If so, to what extent.
3. What are the pitfalls of making Value Engineering changes to an operational system? I think it is an excellent application to initial design and during development, but what if it is applied to a going system in latter life span of that system.

MEMORANDUM

DATE _____

TO _____ AT _____

FROM _____ AT _____

SUBJECT: _____

My present thoughts as to what V. A. is.

1. The assigning of a value to a function. Using this value to determine if function being studied is now being performed or accomplished in the best and most economical function.
2. Cost and suitability analysis. Meeting function and requirement at minimum cost.

What I would like from the course.

1. Can value analysis be effectively applied in process industry? How? Typical Examples

2. Is value analysis being used in the Food Industry?
3. When can value analysis be effectively used by a purchaser of equipment as contrasted to a manufacturer.

Efficiency

MY NEAREST BELIEF NOW OF WHAT
VALUE ANALYSIS IS:

TO OBTAIN THE MAXIMUM FUNCTIONAL
PRODUCT FOR THE LOWEST POSSIBLE COST.

WHAT WOULD HELP ME MOST:

Value Engineering.

D. BERRY.

I believe that value engineering has its place as a discipline along with other disciplines.

However, I feel that together with "Configuration Control," "Maintainability" and other disciplines perhaps the advocates of "value engineering" have pushed this discipline into areas not warranted and out of proportion to its ultimate value.

Quality control for quality controls same is very expensive - I don't know, but I feel that the government is fostering "Value Engineering" across the board in the same manner. One might say this is normal - the pendulum must swing - I say that we as taxpayers have paid an awful lot to educate the procurement personnel of our government. If "value engineering" is so valuable - I advocate specific courses to those people in order to have a sane application of this discipline.

Secondly - I feel that most applications are based on individual costs such as the bolt and spacer application you presented - this represented only the manufacturing and assembly costs - I am not arguing the 8 cent cost, but pointing to the $3/4$ ¢ and $8/10$ ¢ cost figure. I feel that if they had gone to "off-the-shelf" items such as screw and spacer it would have meant less future logistics and maintenance costs together with quicker repairs in case of failure. This is what I meant when

I stated that I felt "Value Engineering" considered only bits & pieces or single components rather than a "System" which was to be kept operable at a minimum cost ~~and~~, maximum M.T.B.F.s, and minimum down time.

I took Value Engineering to learn a new discipline. I believe that a good manager needs all the tools he can get - I think that many times we subconsciously use tools (or disciplines) we have been provided (or taught).

In this context I feel Value Engineering can be of benefit. Whatever is good in this discipline can find use in any decision making if the principle is sound. Thus, this is why I said I wanted to know the method of analyses - the basis for establishing criteria - the thought process required.

Steve Worley

Assignment

1. My nearest belief now of what Value Analysis is:

"A technique for objective evaluation of each operation and all material going into a manufactured product or a business operation as related to product function, product quality, and the total manufacturing cost of the product."

2. What would help me most:

"To develop a readily accessible general technique of applying Value Analysis to;

- process engineering
- research and development
- manufacturing methods
- drafting functions
- engineering paperwork."

Managing the Use of Value Analysis

25 JAN '66

1. My nearest belief now of what value analysis is:

It is the art of evaluating an existing design or operation with the prime objective of reducing cost without adversely affecting quality or performance.

2. What would help me the most:

I need a better understanding of the working techniques. As an Air Force project officer, I need to mentally establish work loads and performance standards before I can accept for the Government, work performed by a contractor.

Major Loren Pflieger
USAF

John W Harris
25 Jan 1966

I. My nearest belief of what Value Engineering / Analysis is:

During the last 5 years of my assignment as an Air Force Civil Engineer, my position & capacity has been purely Staff. Specifically, directly involved in formulating policies and procedures for effective Facilities Programming. I have never been actively involved in the Value Analysis / Engineering process, nor do I have any feel for it. More specifically I do not know what it means. Though it may sound very elementary, to me VA/E is the process of getting the "most" for the "least" without compromise.

II. What will help me most from this course and what I hope to achieve is a clear

-2

John W. Harris

understanding of VAE and a ~~messy~~ meaningful
approach, or rather, a sensible approach to its
application in the U.S. Air Force.

My belief now of what V.A. is:

1. Performance per \$
2. Minimum cost in new designs
3. " cost " existing designs
4. Lowest cost per function
5. Optimum quality at fixed cost
6. Optimum cost at fixed quality
7. A way of life rather than a technique
8. Improvement of components cost with systems considerations
9. A sophisticated name for cost analysis
10. Brainstorming with a lot of people participating
11. Applied system engineering to minimize cost.

1. My present belief is that Value Analysis is a process by which a methodical logic is applied to the design of parts or systems to achieve adequate performance at the lowest possible cost. It is a "bare-bones" approach.

2. What I would like most from this course is not so much the How and Why as the Where and When of V.A.'s application. It's interfaces with reliability and esthetic design (styling) would be of interest. Where should it be applied in an R and D effort?

What would help me most:

1. What activities to consider in the food industry
- 2.- What is V.A.?
- 3.- How to apply V.A. to Civil Engineering (in USAF)
- 4.- " " " " " Cost reduction, maintenance and spare parts managing (in USAF)
- 5.- When to apply V.A. (in R&D?)
- 6.- The process of V.A.
- 7.- How to set up V.A. in an organization
- 8.- Can V.A. be done without a formal organization?
- 9.- How to evaluate the quality of the V.A. work
- 10.- Documentation of V.A.
- 11.- How to overcome negative thinking (make people believe)
Don't minimize. Use an example
- 12.- Don't we do it every day? (without naming it)
- 13.- How to do V.A. more systematically
- 14.- What are the integrations of V.A. with Industrial Engin., Maintenance, Reliability
- 15.- When should there be no V.A.

DONALD K. ZURSCAMIT
CLASS 18
MANAGING THE USE OF
VALUE ANALYSIS

MY NEAREST BELIEF NOW OF WHAT VALUE ANALYSIS IS CENTERS PRIMARILY ON THE EFFORT TO GET THE MOST POSSIBLE SAVINGS IN UNIT COST WITH LITTLE OR ~~NO~~ NO LOSS OF EFFICIENCY, QUALITY, OR SAFETY IN THE PRODUCT. MOST REFERENCES TO VALUE ANALYSIS HAS BEEN DIRECTED TO IMPROVEMENT OF PRESENT FACILITIES, METHODS, AND EQUIPMENT STILL CONSISTENT WITH SUCCESSFUL MISSION COMPLETION AT REDUCED COST.

ORIENTS
EST. & COMMENT
GOALS &
METHODS

WHAT WOULD HELP ME THE MOST IN THIS COURSE WOULD BE:

(1.) A CLEAR UNDERSTANDING OF THE GOALS, METHODS, AND DEVICES NEEDED TO INTEGRATE A SOUND VALUE ANALYSIS PROGRAM TO MISSILE OPERATIONAL REQUIREMENTS

(2.) A CLEAR DIFFERENTIATION BETWEEN "REAL" AND "IMAGINARY" COST REDUCTIONS IN GOVERNMENT AND MILITARY VALUE ANALYSIS PROGRAMS. EMPHASIS ON CONCRETE SAVINGS NOT PAPER SAVINGS AS PRESENTLY ENCOUNTERED IN PROGRAMS SHOULD BE STRESSED FOR THE PROGRAM TO BE WORTHWILE TO THE TAXPAYER AND THE GOVERNMENT.

(3.) METHODS, TECHNIQUES, AND ENVIRONMENT ADJUSTMENTS NEEDED TO CREATE A CONSTRUCTIVE OR POSITIVE ATTITUDE TOWARD VALUE ANALYSIS SHOULD BE OUTLINED AS WELL AS POTENTIAL DANGERS IF THE DATA AND RESULTS ARE NOT PROPERLY PRESENTED TO THE MANAGEMENT, PRODUCTION, AND ENGINEERING DEPARTMENT PERSONNEL.

V. Analysis & Engineering

A.C. Sudgren

I believe that VA is the:

1. Critical engineering examination of something to reduce viceties, to increase operational efficiencies or retain minimums, and to reduce material and manpower costs through this initial or reexamination.

The most help to me:

1. Would be able to achieve the definition of V.A. in all maintenance or manufacture at my station.

I want to learn from this course: the relationship between V.A. and Cost Reduction.
To learn how to organize a VA study.
To learn to "sell" the tin spoon as a replacement for the gold one.

My Nearest Beliefs Now Concerning What Value Analysis Is.

I really don't know, but it would seem to me that Value Analysis, or Value Engineering, would be concerned with evaluating the worth in dollars & cents of the component parts of a given product with respect to their function and importance in that product. In other words, evaluating the possibilities of reducing the costs of a given product without changing its quality or performance.

What Would Help Me Most?

To understand what Value Analysis is & how to use it specifically in the development, manufacturing, and marketing of the products of Udico Electric Co. (which are small electric appliances). Also the part Value Analysis should play in the design & development of new products not marketed as yet.

ROBERT C. YOUNG
UDICO ELECTRIC CO

1/24/66
R.W. Ayer

My nearest belief of what "Value Analysis" is:

A system for critically evaluating the specific functions and requirements of units of equipment to arrive at a "true" value of the individual functions in an attempt to secure equally satisfactory or acceptable (esteem value) results at a substantially lower cost.

Unfortunatly I believe that the main field of use of Value Analysis is in mass production of mechanical-type items.

What would help me most

1) If ~~you can~~ ^{we can find} provide some methods for applying the basic techniques to contribute to a cost reduction program in the maintenance activities in an industrial plant. In my specific case it's an oil refinery, but the basic equipment such as piping, valves, motors, turbines etc. is common to many industrial operations

2) Methods of utilizing (and communicating the possibility of such utilization) V.A. techniques in the construction of new process plants, pipelines etc. It would seem that some new thinking in this area might result in substantial savings in capital investment, but possibly much of our thinking is in the area of minor changes, like using a less expensive valve, motor or such, rather than examining basic concepts.

3) If we can find applications under ① or ② how do we get people "on the team"?

1. My nearest belief now of VA is:

A special case of cost effectiveness, possible on component or subsystem level, where cost is minimized subject to a particular performance level.

2. What would help me most,

a. limitations and advantages of VA,

b. where applied?

c. when applied or what stage of a systems development, production - operation?

d.

Questions

A. If you agree that there is a tendency for "misfits" to gravitate into V.E. work, please discuss any thoughts you may have on:

~~1. Why?~~

2. How can these people be detected in time to avoid them.

B. How do you deal with the individual who avoids doing value work on a basis of function. Some V.E.'s seem to feel this is "childish".

A man who does not use the function bases is not a V.E.

Like a ship pilot that will not use compass
Condo easy ones -

Function Approach

clarifies problem

often re-defines the problem

Function structure

accommodate msc practice

o ptimize mkt value

SOME COMPETENT
COMPANIES FOR YOUTH TRAINING

V. A. Incorporated
Newport Beach Calif -
JK FOWLKES PRES

Value programs for Industry
Schenectady New York
RE Fountain Pres

Value Associates
5364 N NEW JERSEY ST
INDIANAPOLIS IND.