

التدريب ... المستقبل  
TRAINING FOR THE FUTURE  
الكويت - أكتوبر ٩٣ . ٩٣  
KUWAIT - OCTOBER 93

MANAGEMENT TRAINING IN THE EGYPTIAN  
TRANSPORT ORGANISATIONS: IS THERE A DIFFERENCE



الهيئة العامة للتعليم التطبيقي والتدريب

THE PUBLIC AUTHORITY  
FOR APPLIED EDUCATION & TRAINING.

**MANAGEMENT TRAINING IN THE EGYPTIAN  
TRANSPORT ORGANISATIONS: IS THERE A DIFFERENCE**

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**1. INTRODUCTION**

Intercity road passenger transport in Egypt is mainly provided by four deregulated bus companies. Each of these companies serves a different geographical area: the East, Middle and West Delta companies covering the Delta region and the Upper Egypt company which serves the north-south Nile corridor. On the other hand, the road and water freight transport is mainly provided by seven deregulated companies. These include five road freight companies and two water freight companies.

Management of transport companies is becoming an increasingly complex and sophisticated task. There is a need for managers with high levels of expertise and communication skills. Training can be looked upon as contributing both to the development of the organisation as well as to the betterment of individuals. Training aims to foster the business success and growth of the transport industry through manpower development. This is meant to improve the companies most valuable asset their workforce.

A questionnaire survey was undertaken in an attempt to infer the way in which senior managers of transport companies/authorities as well as transport experts in Egypt perceive the main components of the training cycle. The main findings of the questionnaire survey are presented in Abbas, 93.

This paper is mainly concerned with establishing whether there exists a difference in the responses of the questionnaire among four main groups. The first group represents responses of senior managers of three intercity bus companies, namely the East Delta, Middle Delta and Upper Egypt bus companies. The second group embodies responses of senior managers of two water freight transport companies, namely the river transport and the water transport companies. The third group represents responses of senior managers of the Egyptian National Authority of Tunnels (ENAT). Lastly, the fourth group represents responses of professional transport experts.

This comparison is meant to test whether as a result of the different transport activities that the organisations in each of these groups undertake, there will be a difference in the way their senior managers perceive different components of the training process. The study also considers the group of transport specialists to act as a bench-mark for comparison. It attempts to statistically infer whether responses of the senior managers of transport organisations, regarding the training process, would

significantly differ from those of the transport experts.

The paper also discusses the current system of functioning of the training departments in these organisations. It suggests an alternative system that is thought to produce more efficient and effective results out of training. Training activities of the Egyptian National Institute of Transport (ENIT), an institute specialised in transport education, training, research and consultancy, are presented.

## 2. THE TRAINING MECHANISM

The training process, as perceived by Abbas, 93, is depicted in Figure 1. This is a dynamic iterative process. It comprises seven stages, namely knowledge of organisational goals, setting of training objectives, assessment of training needs, design of training, delivery of training, measuring training outputs, and evaluation of training. A detailed discussion of each of these stages is presented in Abbas, 93.

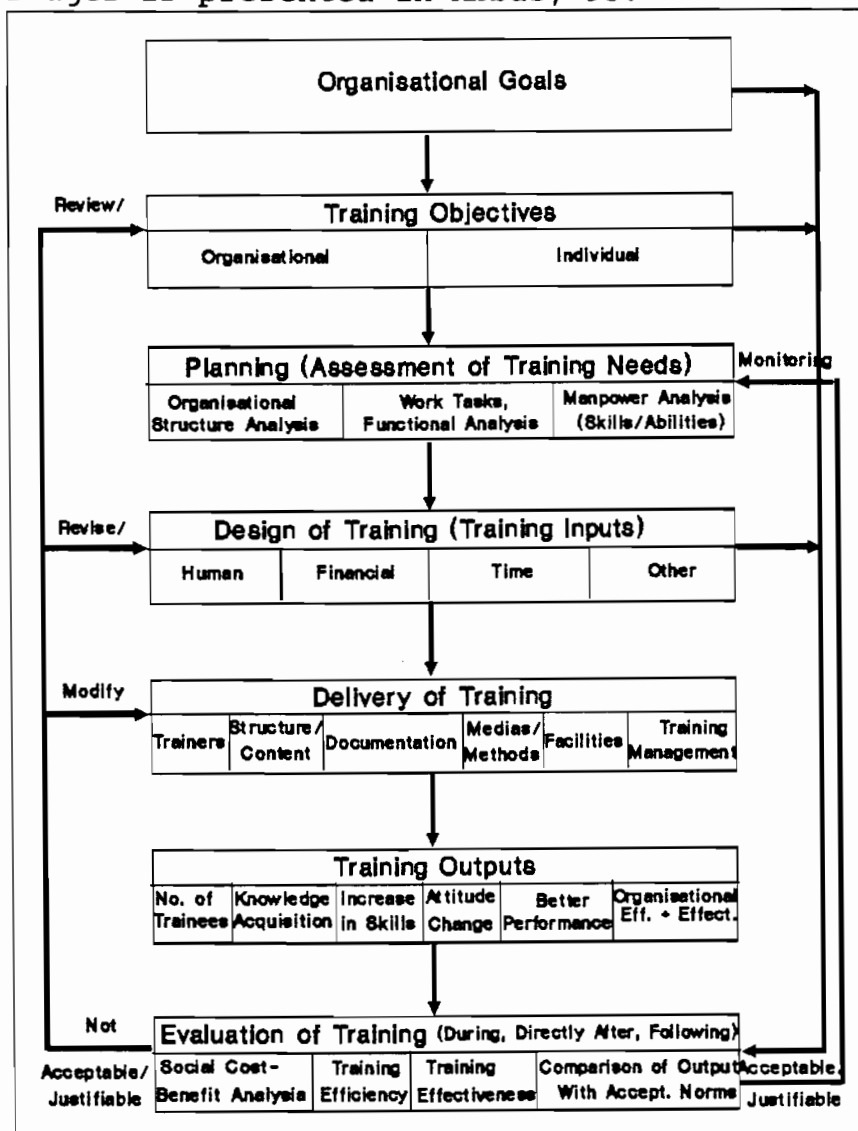


Figure 1: The training mechanism (Source: Abbas, 93)

### 3. MANAGEMENT TRAINING AS PERCEIVED BY SENIOR MANAGERS OF TRANSPORT ORGANISATIONS AND TRANSPORT EXPERTS

A detailed questionnaire, designed by the author, was completed by four groups. The first being senior managers of three passenger transport companies (out of four main intercity bus companies). The second being senior managers of two water freight companies (out of seven main freight companies). The third represents responses of senior managers of the ENAT. In addition, the author conducted meetings and personal interviews with several transport experts who have completed the questionnaire. These represent the fourth and last group. Table 1 shows the numbers of respondents in each of these four surveyed groups.

Table 1: Number of respondents in each of the four response groups

Comparison Groups	Respondents (Group Size)	Number
Group I (3 Passenger Transport Companies)		25
Group II (2 Water Freight Companies)		25
Group III (National Authority for Tunnels)		10
Group IV (Transport Experts)		11
Total		71

The questionnaire is of the revealed preference type. It tackles issues such as reasons for training, factors for choosing training establishments and criteria for selecting nominees for training. It attempts to identify the course topics that are perceived as most relevant in the current period of deregulation of the Egyptian transport industry. In addition, several other questions attempt to determine the preferable timing, group size, course content, language and method of training. Details of the questionnaire, steps taken to conduct the survey and the level of response are presented in Abbas, 93. The results of the questionnaire summarised in Abbas, 93 are as follows.

1. Raising efficiency and effectiveness of the performance of employees is regarded as the most important training objective.
2. The topics of courses is considered to be the most important factor in choosing a training establishment.
3. The current position of the nominee is considered to be the most important criterion in selecting nominees for training.
4. Transport Economics is perceived to be the most important course topic necessary to achieve the current professional goals of the transport companies.
5. The 9.00 a.m. to 1.00 p.m. is regarded as the best timing for running the courses.
6. Respondents generally prefer trainees to come from several organisations and to have similar work responsibilities.

7. The most preferred training group size is from 15 to 20 participants.
8. Most respondents chose the contents of courses to be more of a specific nature. Almost all of them showed interest in being involved in the design of the courses.
9. English translated into Arabic was chosen to be the best alternative for preparing the course documents. On the other hand, Arabic supported by English terms was chosen as the preferable way for presenting the courses.
10. Respondents chose the emphasis of the course contents to be on a mixture of both practical and theoretical issues with the practical side outweighing that of the theoretical.
11. Respondents chose the background of the instructors to be from a combination of both academics and practitioners, but with the number of academics outweighing that of practitioners. As for the nationality of the course instructors, a combination of both Egyptians and foreigners, with Egyptian instructors outweighing the foreign ones, was perceived as the best choice.
12. The lecture forum is perceived as the most appropriate training method.
13. Training came as the most crucial current role to be played by the ENIT.

#### **4. NONPARAMETRIC STATISTICAL ANALYSIS OF THE QUESTIONNAIRE RESPONSES**

The questionnaire used in this study was designed to obtain the responses mainly in an ordinal and nominal form. Nonparametric statistical tests were utilised in analysing the data and inferring conclusions. These tests are well suited for analysing nominal and ordinal types of data. Many nonparametric tests do not rely on the large sample properties of distributions, and are therefore useful and more appropriate for small sample sizes of data. Nonparametric statistical tests proved to be a valuable and helpful tool for the analysis of the data gathered from the questionnaire survey. The purpose of each of the tests used in this study is described in detail and the results of the various tests are displayed in tabular forms. All of the tests undertaken in this study were performed using the Statistical Packages For Social Sciences (SPSS/PC+ V2.0) software, see Norusis, 1988.

##### **4.1 The Patterns And Central Tendencies Of Responses**

Descriptive statistics were computed to provide an indication of the patterns and central tendencies of responses of the senior managers of transport organisations and the experts to the questionnaire. As ordinal data do not have any meaning in an absolute numeric sense, the best statistical indicator that can describe the pattern of this level of information is the mode and the median. The mode represents the most frequently occurring value of responses. The median, additionally, represents the value below which there is a 50% probability of occurrence of responses. Tables 2 through 6 shows the mode and the median for

the ordinal parameters. Tables 7 through 10 displays the percentage of responses for the nominal parameters.

#### **4.2 Testing The Hypothesis Of No Difference In Responses Among The Four Main Groups Of Respondents**

According to Siegel and Castellan (1988) 'sample values almost invariably differ somewhat, and the question is, whether the differences among the samples signify genuine population differences, or whether they represent merely chance variations such as are expected among several random samples drawn from the same population'. Nonparametric statistical tests can indicate whether differences in group samples are evident enough to lead to the conclusion that the circumstantial conditions of, or that the processes applied to, each of these groups are different.

The aim of the analysis, presented in this paper, is to attempt to infer, statistically, whether there is any significant difference in the patterns of questionnaire responses of four distinct groups. These are:

1. senior managers of three intercity bus companies, namely the East Delta, Middle Delta and Upper Egypt bus companies;
2. senior managers of two water freight transport companies, namely the river transport and the water transport companies;
3. senior managers of the ENAT; and
4. transport experts.

This comparison is meant to test whether as a result of the different transport activities that the organisations in each of these groups undertake, there will be a difference in the way their senior managers perceive different components of the training process. The study also considers the group of transport specialists to act as a bench-mark for comparison. It attempts to statistically infer whether responses of the senior managers of transport organisations, regarding the training process, would significantly differ from those of the transport experts.

The  $K$  independent samples nonparametric tests are relevant here.  $K$  here being equal to four groups. These tests allow the flexibility of the four samples to be random samples obtained from four populations, where it is acceptable to have the four samples of different sizes. The rejection/confidence level i.e. the level of significance for each of the following tests is set at  $\alpha = 0.05$ .

When the level of information of the sample data is ordinal, the Kruskal-Wallis one-way analysis of variance (K-W test) is considered to be the most appropriate test to establish whether there is a significant difference among  $K$  samples, or whether they have been drawn from the same population.

$H_0$  (the null hypothesis) suggests that there is no significant difference in the ordinal responses among the four groups. The

$K$  samples are drawn from populations having the same distribution.

$H_1$  (the alternative hypothesis) assumes the converse; there is a significant difference in the ordinal responses among the four groups. The  $K$  samples are drawn from populations that are stochastically different i.e. having different statistical distributions explaining them.

The null hypothesis is rejected if the K-W test produces a value with a probability of occurrence, under the null hypothesis, that is equal to or less than alpha (the probability of rejection).

Results of applying the K-W test to the ordinal parameters of the questionnaire are displayed in Tables 2 to 6. The Tables show for each of the parameters that were tested using the K-W test, whether the null hypothesis is rejected or not rejected.

The Chi-square test was used for testing whether there is a characteristic difference in the dichotomous responses among the four groups.

$H_0$  (the null hypothesis) suggests that there is no significant difference in the nominal responses among the four groups.

$H_1$  (the alternative hypothesis) assumes the converse; there is a significant difference in the nominal responses among the four groups.

The null hypothesis is rejected if the Chi-square test for  $K$  independent samples produces a value with a probability of occurrence, under the null hypothesis, that is equal to or less than alpha (the probability of rejection). Tables 7 through 10 show for each of the parameters that were tested by the Chi-square test for  $K$  independent samples, whether the null hypothesis is rejected or not rejected.

#### **4.3 Testing The Hypothesis Of No Agreement Among Respondents**

A statistical measure of agreement and its significance were computed to test the judgemental consensus among all respondents to the questionnaire. Measures of agreement are, specifically, useful in obtaining an understanding and appreciation of inter-judgement reliability. The rejection/confidence level i.e. the level of significance for the following measure of agreement test is set at alpha = 0.05.

When the responses are at least of the ordinal level of information, the Kendall coefficient of concordance  $W$  test is useful in determining the agreement among several respondents. The  $W$  coefficient is a measure of the relation among several rankings given by the respondents. The  $W$  coefficient represents an index of the degree of difference between the actual agreement shown in the data, and the total perfect agreement. Values of the  $W$  coefficient range between zero and one.

$H_0$  (the null hypothesis) suggests that the  $N$  sets of responses

are independent i.e. the respondents' rankings are unrelated to each other.  $N$  here is equal to the total number of respondents i.e. 71.

$H_1$  (the alternative hypothesis) assumes the converse; that the  $N$  sets of responses are dependent i.e. the respondents' rankings are related to each other.

If the null hypothesis is rejected, it is statistically inferred that the agreement among the  $N$  rankers is higher than it would be due to mere random chance. A high or a significant value of  $W$  could be understood as meaning that the respondents are applying the same criteria in ranking the questionnaire parameters. However, it should be clearly stated that a high or a significant value of  $W$  does not essentially mean that the observed rankings are the correct, impartial ones.

Tables 2 to 6 show the value of  $W$  for each of the questionnaire parameters that were tested by the Kendall coefficient of concordance  $W$  test, as well as whether the null hypothesis is rejected or not rejected.

Table 2: Ranking Reasons for Training: Descriptive statistics, testing hypothesis of no difference in responses among the four groups, testing hypothesis of no agreement among respondents.

Reasons for Training	Descriptive Statistics	Comparison Statistics	Agreement Statistics
	Mode/Median	Kruskal-Wallis Test at 5% Significance Level	Kendall Coefficient of Concordance ( $W$ ) Test at 5%
Employees Acquiring New Skills	2/3	Not Rejected	<p style="text-align: center;"><math>W = 0.73</math> Null Hypothesis Rejected</p>
Raising Efficiency & Effectiveness of Emp.	1/1	Not Rejected	
Increasing the Number of Trained Emp.	6/6	Not Rejected	
Motivating & Raising the Moral of Emp.	6/6	Not Rejected	
Widening Scope & Intellectual level of Emp.	3/3	Not Rejected	
Personal Reasons	No Rank/8	Not Rejected	
Training: Just an Administrative Obligation	No Rank/8	Not Rejected	
Transfer of Acquired Skills from Trained	6/6	Not Rejected	
Other Reasons	No Rank/ No Rank	Not Rejected	



Table 3: Ranking Factors Used for Choosing a Training Establishment: Descriptive statistics, testing hypothesis of no difference in responses among the four groups, testing hypothesis of no agreement among respondents.

Factors Used for Choosing a Training Establishment	Descriptive Statistics	Comparison Statistics	Agreement Statistics
	Mode/Median	Kruskal-Wallis Test at 5% Significance Level	Kendall Coefficient of Concordance (W) Test at 5%
Chosen by Trainee	No Rank/8	Not Rejected	W = 0.72 Null Hypothesis Rejected
Availability of Proper Training Facilities	1/2	Not Rejected	
In Response to Outside Pressure	No Rank/9	Not Rejected	
Cost of Courses	5/5	Not Rejected	
Topics of Courses	1/1	Not Rejected	
Timing & Administration of Courses	3/4	Rejected	
Reputability of the Quality of Courses	3/4	Not Rejected	
Publicity & Personal Contacts	No Rank/10	Not Rejected	
Personal Reasons	No Rank/ No Rank	Not Rejected	
Ad-hoc Choice	No Rank/ No Rank	Not Rejected	
Acquiring Accredited & Certified Courses	No Rank/9	Not Rejected	
Other Factors	No Rank/ No Rank	Not Rejected	

Table 4: Ranking Criteria Followed for Selecting Nominees for Training: Descriptive statistics, testing hypothesis of no difference in responses among the four groups, testing hypothesis of no agreement among respondents.

Criteria Followed for Selecting Nominees for Training	Descriptive Statistics	Comparison Statistics	Agreement Statistics
	Mode/Median	Kruskal-Wallis Test at 5% Significance Level	Kendall Coefficient of Concordance (W) Test at 5%
Age of Nominee	5/6	Not Rejected	W = 0.59 Null Hypothesis Rejected
Academic Qualifications of Nominee	2/2	Not Rejected	
Current Position of Nominee	1/3	Rejected	
Interests of Nominee	4/5	Not Rejected	
Level of Performance of Nominee	3/4	Not Rejected	
Personal Reasons	No Rank/11	Not Rejected	
Sex of Nominee	9/9	Not Rejected	
Willingness of Nominee	7/7	Not Rejected	
Nominee Fitting Training Centre Requirements	1/4	Not Rejected	
Length of Service of Nominee	No Rank/8	Not Rejected	
Other Criteria	No Rank/ No Rank	Not Rejected	

Table 5: Ranking Course Titles Achieving Professional Goals: Descriptive statistics, testing hypothesis of no difference in responses among the four groups, testing hypothesis of no agreement among respondents.

Course Titles Achieving Professional Goals	Descriptive Statistics	Comparison Statistics	Agreement Statistics
	Mode/Median	Kruskal-Wallis Test at 5% Significance Level	Kendall Coefficient of Concordance (W) Test at 5%
Transport Economics	1/4	Rejected	W = 0.21 Null Hypothesis Rejected
Transport Planning	1/5	Not Rejected	
Information Systems for Management	1/5	Rejected	
Transport Marketing	4/5	Rejected	
Transport Efficiency	3/4	Rejected	
Performance Evaluation	No Rank/9	Not Rejected	
Financing Transport Projects	No Rank/10	Not Rejected	
Computers & System Analysis	No Rank/10	Rejected	
Negotiation Skills & Public Relations	No Rank/13	Not Rejected	
Management of Human Resources & Training	No Rank/11	Not Rejected	
Analytical & Modelling Skills	No Rank/14	Not Rejected	
Analysis & Reduction of Costs	9/7	Not Rejected	
Skills of Leadership & Team Work Build.	No Rank/12	Not Rejected	
Valuation of Assets & Portfolio Handling	No Rank/14	Not Rejected	
Organisational Restructuring	No Rank/10	Not Rejected	
Passenger/Freight Transport Operations	No Rank/12	Not Rejected	

Table 6: Ranking Courses Timings/Training Methods/ Roles of ENIT: Descriptive statistics, testing hypothesis of no difference in responses among the four groups, testing hypothesis of no agreement among respondents.

Courses Timings	Descriptive Statistics	Comparison Statistics	Agreement Statistics
	Mode/Median	Kruskal-Wallis Test at 5% Significance Level	Kendall Coefficient of Concordance (W) Test at 5%
9.00 A.M. to 1.00 P.M.	1/1	Rejected	W = 0.76 Null Hypothesis Rejected
2.00 P.M. to 6.00 P.M.	2/2	Not Rejected	
6.00 P.M. to 10.00 P.M.	3/3	Not Rejected	
Other	No Rank/ No Rank	Not Rejected	
<b>Training Methods</b>			
Lectures	1/3	Not Rejected	W = 0.46 Null Hypothesis Rejected
Workshops	8/4	Not Rejected	
Field Case Studies	2/2	Not Rejected	
Round Table Discussions	4/3	Not Rejected	
Practical Research	6/4	Not Rejected	
In House Training	6/6	Not Rejected	
<b>Roles of the Egyptian National Institute of Transport (ENIT)</b>			
Educational	1/3	Not Rejected	W = 0.66 Null Hypothesis Rejected
Training	1/2	Not Rejected	
Research	1/2	Not Rejected	
Consultancy	4/4	Not Rejected	

Table 7: Choice of Group Participants/Group Size: Percentage, testing hypothesis of no difference in responses among the four groups.

Trainees (Group Participants) from	Percentage	Comparison Statistics Chi-square Test at 5% Significance Level
Several Organisations	91	Not Rejected
One Organisation	9	Not Rejected
<b>Trainees (Group Participants) have</b>		
Similar Work Responsibilities	54	Not Rejected
Different Work Responsibilities	46	Not Rejected
<b>Group Size</b>		
6 - 10	10	Not Rejected
10 - 16	39	Not Rejected
16 - 20	40	Not Rejected
20 - 25	8	Not Rejected
25 - 30	3	Not Rejected
Other	0	Not Rejected

Table 8: Choice of Courses Contents/Involvement in Course Design/Emphasis of Course Contents: Percentage, testing hypothesis of no difference in responses among the four groups.

Courses Contents	Percentage	Comparison Statistics Chi-square Test at 5% Significance Level
Specific (Deeply Detailed)	78	Not Rejected
General (Widely Scooped)	22	Not Rejected
<b>Interested to be Involved in Course Design</b>		
Yes	99	Not Rejected
No	1	Not Rejected
<b>Emphasis of Course Contents</b>		
Theoretical Subjects	1	Not Rejected
Practical Subjects	0	Not Rejected
Theoretical > Practical	28	Not Rejected
Practical > Theoretical	42	Not Rejected
Theoretical = Practical	29	Not Rejected

Table 9: Choice of Language of Course Documents/Course Presentation: Percentage, testing hypothesis of no difference in responses among the four groups.

Language of Course Documents	Percentage	Comparison Statistics Chi-square Test at 5% Significance Level
Arabic	12	Not Rejected
English	1	Not Rejected
Arabic Supported by Some English Terms	41	Not Rejected
English and Translated into Arabic	46	Not Rejected
Other	0	Not Rejected
<b>Language of Presentation</b>		
Arabic	12	Not Rejected
English	1	Not Rejected
Arabic Supported by Some English Terms	81	Not Rejected
English and Directly Translated into arabic	6	Not Rejected
Other	0	Not Rejected

Table 10: Choice of Background/Nationality of Course Instructors: Percentage, testing hypothesis of no difference in responses among the four groups.

Background of Course Instructors	Percentage	Comparison Statistics Chi-square Test at 5% Significance Level
Academics	0	Not Rejected
Practitioners	5	Not Rejected
Academics > Practitioners	35	Not Rejected
Practitioners > Academics	30	Not Rejected
Practitioners = Academics	30	Not Rejected
<b>Nationality of Course Instructors</b>		
Egyptians	27	Not Rejected
Foreigners	0	Not Rejected
Egyptians > Foreigners	56	Not Rejected
Foreigners > Egyptians	1	Not Rejected
Foreigners = Egyptians	16	Not Rejected

## 5. CONCLUSIONS FROM THE STATISTICAL ANALYSIS OF THE QUESTIONNAIRE RESPONSES

The main conclusions inferred from the statistical analysis of the questionnaire responses can be summarised as follows:

1. The descriptive statistics representing the patterns of responses for the ordinal parameters of the questionnaire and indicating the central tendencies (location) of the responses (mode and median) and displayed in Tables 2 to 6 support, in statistical terms, the interpretations and conclusions previously obtained in Abbas, 93 and summarised in section 3 of this paper.
2. The percentages representing the patterns of responses for the nominal parameters of the questionnaire and displayed in Tables 7 to 10 support the interpretations and conclusions previously obtained in Abbas, 93 and summarised in section 3 of this paper.
3. The results of significance testing of the hypothesis of no difference in responses among the four groups of respondents (Kruskal-Wallis and Chi-square tests) and displayed in Tables 2 to 10 indicate that for most of the parameters of the questionnaire there is no significant, statistical difference in the responses among the four groups.
4. As a consequence of 3, it might be valid to draw conclusions pertaining to transport training in Egypt from the combined responses of these groups. Analysis of the combined responses provides a proper representative view regarding training of the transport professionals in Egypt.
5. Also as a consequence of 3, it could be said that the perception of the respondents towards many components of the training process is not significantly different despite of the different transport activities that each of the four groups perform.
6. Also as a consequence of 3, it is encouraging to say that the way the senior management of the transport organisations perceive many of the components of the training process is not statistically different from the transport experts' perception which is regarded, in this study, as a yardstick for comparison.
7. However, it is fair to state that some few important parameters when tested showed that there exists a statistical difference in the way these parameters were ranked by the respondents of the four groups. These are:
  - \* the timing and administration of courses being collectively ranked as the third factor taken into consideration when choosing a training establishment, see Table 3;
  - \* current position of nominee being collectively ranked as the

- first criterion to be followed for selecting nominees for training, see Table 4;
- \* transport economics, information systems for management, transport marketing and transport efficiency all having high collective ranks as important course titles for achieving professional goals, see Table 5;
  - \* the 9.00 A.M. to 1.00 P.M. being collectively ranked as the most preferable timing for conducting training, see Table 6.
8. The results of significance testing of the hypothesis of no agreement among respondents (Kendall coefficient of Concordance) and displayed in Tables 2 to 6 show that for all the ranking questions of the questionnaire, it is statistically plausible to reject the hypothesis of no consensus, regarding the rankings.

## **6. FUNCTIONING OF TRAINING DEPARTMENTS**

In the course of conducting the questionnaire survey the author got acquainted with the current system of functioning of the Training Departments (TDs) in several transport organisations. This system was studied in light of the analysis of the questionnaire with the purpose of suggesting an alternative system of functioning of TDs that is thought to produce a more effective and efficient results out of training.

### **6.1 Current System Of Functioning Of Training Departments**

Through discussions, meetings and interviews, the author was able to lay down the system of functioning of the TD that currently exists in most of the main transport organisations in Egypt. This is portrayed in Figure 2. The sequence of functioning can be described as follows.

1. The TD within the transport organisation receives leaflets, brochures, letters, ..etc from training institutes/consultants. These documents would most likely contain details about the topics of training courses offered as well as the times and costs of these courses. It might also include a brief summary of the contents of each of the courses on offer as well as some specifications as regards the type of personnel that this course is meant to benefit most.
2. The TD prepares a proposed training plan for the next financial year. This plan embodies details on the topics of courses to be attended, the cost and timing of these courses as well as the training establishments where trainees would be sent for these courses. In preparing this plan the TD considers the tentative budget allocated for training in the coming financial year.
3. The chairman/executive member of the board of directors holds several meetings with the director of the TD. In these meetings the proposed training plan is thoroughly discussed,

modified and refined with the chairman taking the goals of the organisation into consideration. In these meetings the training budget is also decided.

4. The TD would then send information of the training plan to all the sectors and departments of the organisation requesting their nomination of trainees.
5. The sectors and the departments send their nominations back to the TD.
6. The director of the TD returns to the chairman/executive member of the board of directors to discuss the final selection of nominees bearing in mind the training budget within which he/she can manoeuvre.
7. During the financial year, selected nominees are sent for training.
8. The TD keeps statistical records and time series data on training.

It is fair to mention at this point that most of the main transport organisations go through this process. However, some organisations, namely the bus companies are starting to perform a sort of evaluation of training after trainees come back to their companies.

## **6.2 Proposed System Of Functioning Of Training Departments**

The paper attempts to suggest an alternative system of functioning of the TD which is thought to produce more efficient and effective results. This is displayed in Figure 3. The proposed sequence of functioning can be described as follows.

1. The TD, recognising the mission statement and the goals of the organisation, sets the training objectives that are meant to help in achieving these goals.
2. The TD taking into consideration the training objectives selects techniques for training needs assessment.
3. The TD conducts a training needs assessment exercise throughout the sectors and departments of the organisation. The outcome of this exercise would provide the TD with information necessary to determine the training needs of the organisation both quantitatively and qualitatively.
4. The TD could then work on preparing a training plan that considers all the necessary details e.g. topics of courses, times and costs of courses, training institutes to send trainees to, ..etc.
5. The TD would then make a request to the chairman/executive member of the board of directors for allocation of necessary financial resources required to accomplish the training plan. This request would be supported by findings of the training needs assessment exercise as well as the plan itself and how this plan is meant to achieve the training objectives and consequentially the goals of the organisation.
6. The chairman/executive member would then make a decision regarding the allocated budget for training. In making this decision he/she should consider both the TD request as well

- as the organisational goals and the priorities entailed.
7. If the allocated budget is equal to the requested budget the TD sends relevant information about the training plan to the sectors and departments involved in the plan requesting them to make their nominations of trainees. The TD is also responsible for setting guidelines and criteria to be followed by the sectors and departments when selecting their nominees. On the other hand, if the allocated budget is less than the requested, the TD will have the difficult task of adjusting its training plan to fit into the allocated budget. This involves setting priorities for the selection of training programmes, reducing the number of personnel to be trained, as well as other measures.
  8. During the financial year the selected nominees are sent to the chosen training establishments to receive the elected training courses.
  9. The TD, bearing in mind the training objectives of the organisation, selects techniques for evaluation of training. Evaluation should be performed during the delivery of the training courses, directly after the training courses and following the training courses by a lapse of time.
  10. The results of the evaluation exercise are used by the TD for modifications (refining and adjustments) of future training plans.

#### **7. THE EGYPTIAN NATIONAL INSTITUTE OF TRANSPORT**

One of the important elements of the training process, that was tackled in the questionnaire, is concerned with the factors used to choose the training establishment where trainees would be sent to. In this respect analysis of the questionnaire showed that the topics of courses, the availability of proper training facilities as well as the reputability of the quality of courses, all, are considered as the most important factors taken into consideration when selecting a training establishment.

"Stemming from the acceptance by the Egyptian Ministry of Transport that the main valuable asset is human resources, the Ministry has established the ENIT to be a centre of excellence for transport education, training, research and consultancy in Egypt. This organisation is perceived to have a significant role in the transitional period that the transport industry among other industries is currently moving through.

The main mission statement of the ENIT is to prepare specialists in the field of transport from highly educated personnel and generally to raise the scientific level of personnel working in the transport sector as well as in other inter-related sectors. Also to carry out studies and research, to coordinate the scientific and practical activities, and to organise training courses and seminars in the transport field", Abbas et al., 92.



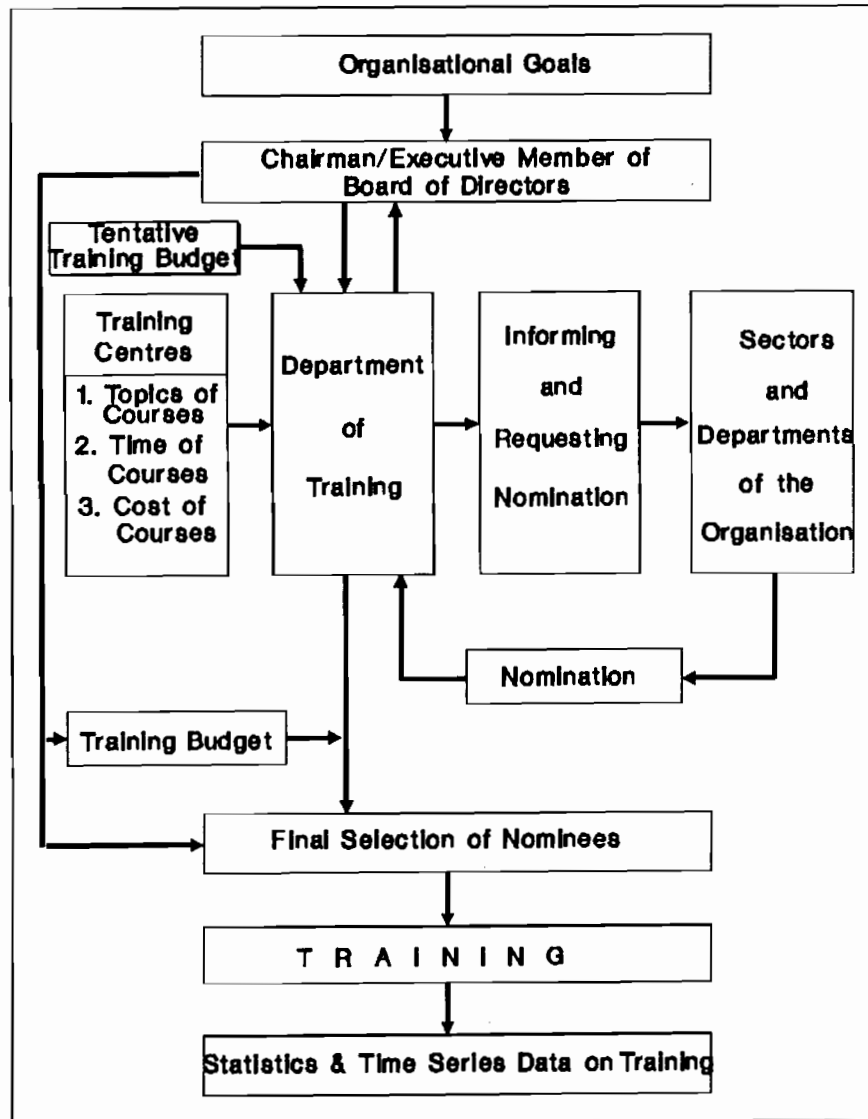


Figure 2: Current system of functioning of a training department in a transport organisation.

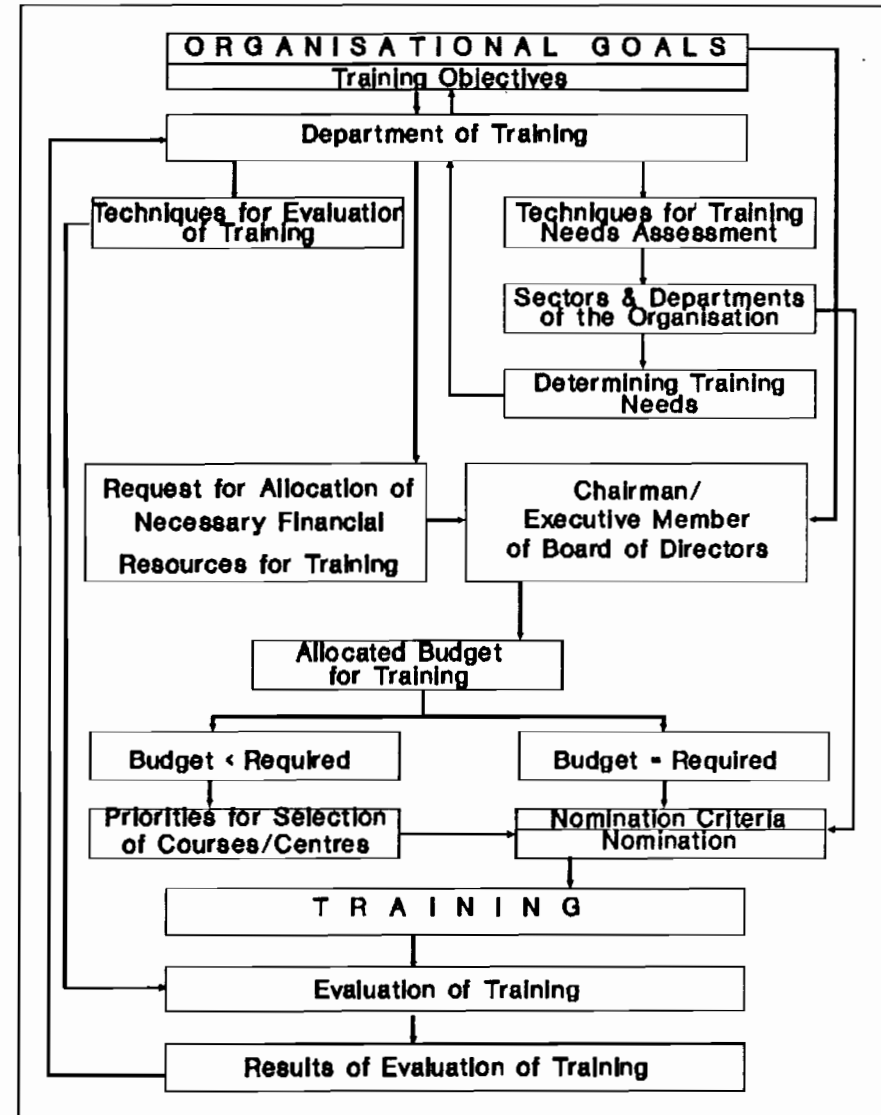


Figure 3: Suggested system of functioning of a training department in a transport organisation.

The following, extracted from ENIT brochures, gives an idea about its training and educational activities in the field of transportation. ENIT training activities include:

- \* executive seminars
- \* short courses
- \* day release courses

Executive seminars are short two or three day seminars for the busy senior manager. They are designed to deal with overall policy and not details. The seminars have keynote papers by international and Egyptian experts followed by panel discussions and an opportunity for small group discussions. A seminar report is produced to remind participants of the major issues discussed and the conclusions drawn.

Most short courses are fifteen days long, spread over three weeks. They are structured around lectures with workshops in which theory is applied to real data. All the courses are fully documented in both Arabic and English.

Training courses organised by the ENIT include: transport planning and modelling, transport economics, financing transport, investment appraisal of transport projects, management of the transport industry, intercity bus operations, rail freight operation and marketing, road freight operation, transport marketing, logistics and chain management, improving transport efficiency.

Day release courses are timetabled from 2 pm to 6 pm for two days each week. This allows participants to stay at work for most of the week but are released to come to the ENIT for two afternoons. ENIT is mainly offering day release courses in computing for the transport industry. These offer a considerable depth of detailed practical experience.

ENIT offers a one year Diploma in Transportation Planning. This represents a full time course for people working in the transport industry and its related sectors leading to a diploma in transport planning. The course is designed to give a general training in transport planning, economics and operation. It is mainly suitable for the mid-career personnel who will become tomorrow's senior managers and who need to expand their knowledge and horizons.

The diploma include the following subjects: transportation planning, economics, statistics, computing, transport technology (road/rail/water), information systems, operations research, transport economics, finance, transport operations (road/rail/water), multi-modal transport, research methodology, marketing, management. These are run in two semesters over a period of 8 months. During the third semester which lasts for 4 months each student has to undertake a report on a project in which he/she investigates a practical transport problem relevant to the company/authority in which he/she is employed.

## 8. CONCLUSION

It is a general truth that people make any business succeed (or fail) irrespective of the systems, procedures, hardware, ..etc that exist. The development of human resources is an essential ingredient for success. There is always a need for continuous professional development, both for the individual and the organisation, to cope and be up-dated with the rapidly and constantly changing ideas, methods, techniques that govern the work environment. This is meant to achieve the organisational objectives with optimum use of resources.

A questionnaire survey was undertaken in an attempt to infer the way in which senior managers of transport companies/authorities as well as transport experts in Egypt perceive the main components of the training cycle.

This paper was mainly concerned with establishing whether there exists a difference in the responses of the questionnaire among four main groups. The first group represents responses of senior managers of three intercity bus companies, namely the East Delta, Middle Delta and Upper Egypt bus companies. The second group embodies responses of senior managers of two water freight transport companies, namely the river transport and the water transport companies. The third group represents responses of senior managers of the ENAT. Lastly, the fourth group represents responses of professional transport experts.

The main findings of the study can be summarised as follows:

1. The descriptive statistics and percentages of parameters of the questionnaire support, in statistical terms, the interpretations and conclusions previously obtained in Abbas, 93 and summarised in section 3 of this paper.
2. The results of significance testing of the hypothesis of no difference in responses among the four groups of respondents indicate that for most of the parameters of the questionnaire there is no significant, statistical difference in the responses among the four groups.
3. Therefore it might be valid to draw conclusions pertaining to transport training in Egypt from the combined responses of these groups.
4. It could be also said that the perception of the respondents towards many components of the training process is not significantly different despite of the different transport activities that each of the four groups perform.
5. It is also encouraging to say that the way the senior management of the transport organisations perceive many of the components of the training process is not statistically different from the transport experts' perception.
6. Few important parameters when tested showed that there exists a statistical difference in the way these parameters were ranked by the respondents of the four groups.
7. The results of significance testing of the hypothesis of no agreement among respondents show that for all the ranking questions of the questionnaire, it is statistically

plausible to reject the hypothesis of no consensus, regarding the rankings.

The paper also discussed the current system of functioning of the training departments in these organisations. It suggested an alternative system that is thought to produce more efficient and effective results out of training. Training activities of the ENIT, an institute specialised in transport education, training, research and consultancy, were presented.

#### **ACKNOWLEDGEMENT**

The views expressed in this paper do not necessarily reflect the views of the Egyptian Government. Acknowledgement is due to the students co-supervised by the author in the 1992 Transportation Planning Diploma at the Egyptian National Institute of Transport.

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