## AN ANALYSIS OF ORGANIZATIONAL EFFECTIVENESS

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## THESIS AND ABSTRACT APPROVED:



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## CHAPTER I

## INTRODUCTION

A statement of the problem. The purpose of this study was to determine (1) the causes or basis for the state of success of the Oklahoma $A$. and $M$. College student branch of the American Institute of Industrial Engineers as an organization; (2) how the organization might better achieve its purpose; and (3) how to apply the organizational theories presented by Chester I. Barnard ${ }^{l}$ and Herbert A. Simon ${ }^{2}$ to an actual organizational situation.

The Oklahoma A. and M. College student branch of the American Institute of Industrial Engineers, hereinafter designated the A.I.I.E., was chosen for its availability, its small compact size, and its lack of direct material incentives to offer to cooperators. The lack of direct material incentives removes several complications from the investigator's point of view, but is believed to increase the task of the officers of the organization immensely. This study covers the activity and the organization of the A.I.I.E. as it existed during the study period of February to June 1950.

Importance of the study. Student organizations have frequently failed with neither the officers or the members understanding the cause of the failure. Frequent periods of reorientation toward the organization objectives seem to be necessary because of the rapid turnover of members and the very short tenure of the officers.

The A.I.I.E. is a young organization and has undergone a period of rapid growth. This growth has been followed by a small shrinkage in the number of

1 Chester I. Barnard, The Functions of the Executive.
${ }^{2}$ Herbert A. Simon, Administrative Behavior.
members, but it is expected that further rapid growth is imminent. An analysis of the A.I.I.E. should reveal the organization's strong points, points of possible failure, and should help orientate the officers at a time when further growth is expected.

Organization of the remainder of the thesis. The thesis is divided into four principle parts as follows: (1) The Organization, (2) The Organization Leadership, (3) The Membership, and (4) Conclusions.

The first section consists of a study to determine: the present status of the formal organization, the organizational objectives, and the extent to which these objectives were accomplished. The second section is devoted to a study of the leaders of the organization and to the degree of success they achieved in the pursuit of their various functions. The third section is a study of the members, their desires and their satisfactions. The fourth section sets forth the findings of the preceeding sections, and makes recommendations for the development of the organization.

The method of procedure. The data for the study was gathered by several means, the principle one being interviews with seventeen members, five officers of the organization, and five non-members. The interviews were conducted from the lists of questions shown in the appendix ${ }^{3}$, and the replies were recorded. Data was also taken at the A.I.I.E. meetings, at the officers meetings, and during informal contacts with various other members and nonmembers. The theories of Barnard and Simon were applied to the data collected, and from this analysis, conclusions were drawn and recommendations made. The data from the interviews was not compiled into table form due to the variety of replies.
${ }^{3}$ See appendix, p. 28 。

The twenty-two members and officers of the organization interviewed represented a 35 per cent sample of the sixty members. The seventeen members interviewed were divided into two groups, active members and inactive members. Nine inactive members and eight active members were interviewed. The basis for distinction between these groups was the regularity of attendance at meetings, the amount of attention paid to the way the A.I.I.E. was run, and the regularity of reading of the newsletter. The members who replied "yes" or "regularly" to two of the three questions, numbers twenty-two, twentythree, and twenty-four 4 , were considered active. Those members who said they never attended meetings or who did not reply "yes" or "regularly" to two of the three questions were considered to be inactive.

No conclusions should be drawn, from the sample taken, as to the total number of inactive members in the membership. The inactive and active member portions of the sample interviewed were held as even as possible. However, the ratio of active to inactive members will approximate that chosen for the study, as the average attendance at meetings is twenty-five to thirty members of a membership of sixty.

The data from the questions asked the members 5 numbers sixteen, twentyseven, and twenty-eight was found to be insignificant for this study.

> 4 See appendix, p. 29.
> 5 See appendix, p. 28.

The organization structure．The formal organization of the A．I．I．E．was composed of a group of five officers and approximately fifty－five members． The officer group consisted of a President，Vice－President，Secretary， Treasurer，and a representative to the Oklahoma Institute of Technology Student Council．The constitution ${ }^{l}$ did not define the duties or the formal relationship of the officers．In practice the officer group functioned as a council in which each member had an equal voice．The President acted as chairman of the A．I．I。E。 meetings and presented the action of the council to the membership．The President maintained control over，and was responsible for，the functions of the various officers and the work of the various committees which were appointed by him．

Membership in the A．I．I．E．was restricted to those students who were en－ rolled in the School of Industrial Engineering and Management．The member－ ship was composed of 68 per cent senior students， 20 per cent junior students， and 12 per cent freshmen and sophomore students．The enrollment in the School of Industrial Engineering and Management was 48 per cent senior students， 23 per cent junior students，and 29 per cent freshmen and sophomore students．

The A．I．I。E。held meetings on alternate Thursday evenings．The meetings were composed of a business session followed by a speaker or perhaps enter－ tainment．The meetings were concluded with an informal gathering for social contact among the members．This portion of the meeting was known as the＂coke hour＂，as soft drinks were served．The length of the meetings varied from
${ }^{1}$ Constitution of the Oklahoma A．and M．Chapter of the American Institute of Industrial Engineers，p．1．
one and a half to two and a half hours, depending on the length of the business meeting and the length of the speaker's talk.

The A.I.I.E. was subordinate to the national organization of the American Institute of Industrial Engineers, from whom it received its chapter. Local guidance was provided by an elected faculty advisor who acted as counselor to the officers.

The organization objectives. The formal objectives as given in Article II of the constitution of the A.I.I.E. are as follows:

1. To promote a better understanding of Industrial Engineering principles.
2. To represent the body of Industrial Engineering students of the Oklahoma $A_{0}$ and $M_{0}$. College in all campus activities.
3. To disseminate technical, scientific, and professional information.
4. To cultivate fraternal feeling and to promote a professional attitude among the members. ${ }^{2}$

The study revealed that the officers of the organization agree, in general, with these objectives, but do not agree with their order of importance. Fraternal feeling, or social contacts, was found to be the primary objective as it was given by all of the officers. The officers believed that dissemination of technical information and better understanding of the industrial engineering principles were of next importance as three of the five officers gave those objectives. The other objectives were of secondary importance, for only two of the officers mentioned organizational experience for members, and only one officer gave professionalism as an objective。 None of the officers mentioned representation of the industrial engineering students in campus activities.

The officers will direct an organization toward those objectives that they believe to be of greatest consequence. Therefore, it was of importance,
${ }^{2}$ Ibid., p. 1.
in light of the variance between the constitution and the officers, to ask whether one or the other should be changed. Here was demonstrated the need for a scale for the evaluation of organization objectives. If an organization has taken an objective that in the minds of its members is impossible of accomplishment it can only fail. Therefore, the organization must select objectives for which the members believe there is a good probability of eventual accomplishment. The first criterion of an objective must be the members acceptance of the probability of its accomplishment。 An organization can elicit the necessary cooperative effort from its members only if the objectives are such that the members desire or support them. The second criterion of an objective must be cooperative support. Whitehead ${ }^{3}$ believes, "It is the future objective within a social setting that is of importance to human beings." Therefore, the third criterion of a group of objectives must be future advantages with a pleasant, or satisfying present. The inclinations of the members must be developed before these criteria may be applied to the A.I.I。E. objectives.

Organizational effectiveness. Effectiveness was defined, for this study, as the ability of an organization to accomplish its objectives. "The degree of accomplishment indicates the degree of effectiveness." 4 The evaluation of the success of an organization must take into consideration the degree of achievement of its objectives. An organization must appear to be accomplishing its objectives to a substantial degree or the willingness of its cooperators will vanish and the organization will have failed. However, the complete achievement of objectives can remove the need for the organization
${ }^{3}$ T. N. Whitehead, Leadership in a Free Society, p. 21. 4 Chester I. Barnard, The Functions of the Executive, p. 55.
and thus it may destroy itself.
The A.I.I.E. was reported by 64 per cent of the members to be seldom effective on the organizational goals as the members understood them. Sixty per cent of the non-members reported the A.I.I.E. seldom effective on the organizational goals as the non-members understood them. The remainder of both groups reported the A.I.I.E. to be frequently effective. These groups did not find the organization consistently reaching what they believe to be the organizational objectives. This is a normal situation, for the members had forgotten that the objectives were so constructed as to be continuing, and were not ones which might be accomplished at once. This eliminates complete achievement from consideration, and the members could not measure well the degree of accomplishment.

The officer group reported much greater effectiveness with 80 per cent finding the A.I.I。E. frequently effective on the organizational goals as the officers understood them. This means the organization was satisfying the objectives as the officers understood them, and the officers believed the organization was satisfying the members objectives. The majority of both officers and members reported that the officers controlled the organization. Thus the organization was directed toward the objectives as the officers understood them, and consequently they were more conscious of goal achievements. Final judgment on goal achievements must be delayed until the members: views are developed.

Organizational efficiency. Efficiency was defined, for this study, as the ability to educe active cooperation from possible cooperators. The survey found that 52 per cent of the adverse comments made on the A.I.I.E. were concerned with the manner in which the meetings were conducted. Business too trivial, business session too long, meetings not planned, and too little
parlimentary procedure used，were typical of the comments．
The meetings were the most important contact point of the organization with the individual member．The adverse comments on the meetings will perhaps explain the basis for the small ratio of attendance to membership．The unplanned meeting was principally the cause of former active members becoming inactive．
＂But certainly in most organization－social，political，national， religious－nothing but the absolute test of survival is significant objec－ tively；there is no basis for comparison of the efficiencies of separate aspects．＂5 This test of Barnard＇s works very well over a long period of time， but the problem here was to determine the efficiency of the A．I．I．E．during the study period．The only measurement of efficiency on a current basis is a measurement of the objections and cooperativeness of the members of the organization．Eighty per cent of the members had objections to the organi－ zation and would make changes in the way the A。I。I。E。 is run．The A．I．I。E． has a membership of sixty and an average attendance of twenty－five to thirty members at each meeting．The above statements indicate that a large portion of the members do not find the organization efficient．

5
Ibid．，p． 93.

## THE ORGANIZATION LEADERSHIP

Leadership is the power of individuals to inspire cooperative personal decision by creating faith: faith in common understanding, faith in the probability of success, faith in the ultimate satisfaction of personal motives, faith in the integrity of objective authority, faith in the superiority of common purpose as a personal aim of those who partake in it. . Cooperation, not leadership, is the creative process; but leadership is the indispensable fulminator of its forces. ${ }^{1}$

The function of the leaders or officers of an organization is that of maintaining the organization. The function of leadership can only be carried on through the communication system of the organization. Therefore, one of the primary functions of the organizational leadership is communication. Communication, the only means for controlling and directing an organization, is so entwined with the other functions of the leaders as to be almost inextricable. An attempt is made in this chapter to separate communication from the other functions of an officer.

Coordination of membership effort. Leadership has been defined as the creation of faith in the members and apparently the leaders of the A.I.I.E. do not enjoy that faith. Only 11 per cent of the members believed the officers were doing a good job, while 65 per cent felt the officers were doing a fair job. More than 50 per cent of the members indicated a need for more planning by the officers.

The above statistics are not as critical as they might appear at first examination. The members of any organization expect their officers to be perfect administrators and when the officers do not achieve that perfection

[^0]the membership is somewhat disappointed. This disappointment or disillusionment is reflected in the above statistics.

The leaders of the A.I.I.E. were unable to coordinate the cooperative efforts of the members for they did not plan for coordination. There was not enough parlimentary procedure employed in the meetings to maintain control. The business portion of the meetings was allowed to proceed at a very slow pace to an uncertain end. It was necessary to postpone the dinner-dance due to a conflict with another social function. Many trivial matters were brought before the meeting which might well have been determined in meetings of the officers, had more officer meetings been held. These objections, voiced by the members, apparently demonstrate a lack of planning. The officers themselves were not coordinated due to lack of communication. An officers meeting preceding each meeting of the A.I.I.E. to plan a program and establish communication among the officers might well have solved these problems.

An objection which consistently appeared in the interviews, was that of a lack of willingness of the members to volunteer for committee work and the reluctance of members to put forth cooperative effort. The president is responsible for the functioning of his committees, therefore, he should select those persons for committee duty from among the volunteers and persuaded volunteers that possess the personality and ability for the task involved. This places motivation ahead of ability, but includes those persons who are motivated through persuasion, in the selection of committeemen. Opportunity for all members on any given committee should be maintained by asking for volunteers. However, the chairman of the committee should always be very carafully selected, motivation considered, for the task involved to insure success. This selection of committees will also meet the objection that only a certain group does all the organizational work, as the work may be more
evently distributed。
A paradoxical situation existed in the A.I.I.E. in that the officers performed a considerable amount of the cooperative work of the members, and bemoaned the lack of assistance from the members. At the same time the members became inactive or unwilling to cooperate due to the lack of cooperative work or activity in which to take part. The officers need to be occupied with organizational maintenance work while the members want and need to do the cooperative work. This situation was demonstrated at the industrial engineering exhibit at the Engineering and Science Exposition. The small group that had done most of the cooperative work belatedly realized the immense task before them and frantically began to call for assistance. The members somewhat reluctantly agreed to help and later, during the interviews, indicated the exposition as a large source of satisfaction to them.

The centers of communication. As one of the primary functions of an officer, communication probably should consume the greater portion of his time and efforts. A criteria for the amount of communication necessary, might be the assumption that no communication is complete until the officer has evidence of its pervading the organization.

Three questions, numbers eleven, thirteen, and fourteen were included in the questions asked the members ${ }^{2}$ to test the amount of information which had been communicated to the individual members. The number of members and the financial status of the A.I.I.E. was unknown to 75 per cent of the members, and 47 per cent replied that they did not get the "word" on special events at all or received it too late. Two of the officers said the members did not get the "word" on special events. Three of the officers did not know the
${ }^{2}$ See appendix, p. 28.
financial or membership status of the organization．It was impossible for the officers to communicate necessary information to the membership when they were ignorant of it．The officers have a dual responsibility as communication centers，that of collecting information from its various sources and that of the dissemination of that information to the members．

Seventy per cent of the members reported that they did not know what the national organization does to assist the local beyond the publication of the Journal of Industrial Engineering．The above statistics indicated that the officers did not realize their responsibility for the communication process and its intimate connection with organizational maintenance。

The formal communication system of the A．I．I．E．had been rather poorly maintained．However，this situation has been improved somewhat by the publication of a newsletter．The publication was begun too late in the semester to have its effect fully evaluated．The newsletter served a triple purpose，the communication of information to the members，furnished an activity in which the members could participate，and relieved the officers for other important work。

The informal organization．＂The term＇informal organization＇refers to interpersonal relations in the organization that affect decisions within it but either are omitted from the formal scheme or are not consistent with that scheme．＂3 This is contrasted with the formal organization which is composed of the permanent relationships given on page four．The primary function of the informal organization is that of communication．The study revealed only 35 per cent of the members received any information other than formal communi－ cations．The officers and members simply did not talk about the A。I。I。E。
${ }^{3}$ Herbert A．Simon，Administrative Behavior，po 148 。
outside the meetings. The non-members are acquainted with an average of two officers and eight members, yet they do not know approximately how large the organization is or what nights meetings are held.

The method of maintaining informal organization says Barnard 4 is to, "Select and promote executives that a general condition of compatibility of personnel is maintained." This means to elect to office those people who are popular, well known, who talk to a lot of the members, and who can cooperate with the other officers. The selection of officers has long been a problem for the A.I.I.E. and demands a solution. The officers are elected for the ensuing semester by the membership at the last meeting of each semester. A great many officers are graduating seniors who become too busy, during their last semester, to devote much time to the organization. The short tenure of office does not encourage study of the organizational problems and consequently the A.I.I.E. is allowed to drift. The A.I.I.E. needs to more carefully select its officers and to train its officers for the positions they are to occupy.

It is the recommendation of the investigator that a nominating committee be appointed two meetings prior to the election meeting. The committee to report a slate of nominees to the membership at the last meeting prior to the election. This will allow the members sufficient time to evaluate the nominees before the election and will allow consideration of the capability and compatibility of all available men. It is further recommended that the nominees for the presidential position be limited to the officers of the previous semester. This restriction will serve a dual purpose. First, the president will always receive some organizational experience and training be-

4 Barnard, op. cit., p. 224 .
fore assuming the duties of this highly important post. Second, the very fact that one of the four elective officers will be elected to the presidency the ensuing semester will tend to bring out the best effort in the officers. The survey indicated that the officers valued the prestige and recognition incentives more highly than did the membership at large. A further recommendation is that the graduating seniors be ineligible to hold office except for the presidential position. There are two reasons for this recommen dation, first, as stated before, the graduating seniors are very busy their last semester and may lack time for the organization, and second, by eliminating seniors the nominees for president will not be restricted to one or two members if the other recomendations are adopted.

The existing informal organization was not detrimental to the extent that no political cliques or minority groups of consequence were reported.

Definition of objectives. The officers of the A.I.I.E. have regarded the organization objectives as permanent goals which needed no adjustment. Actually the goals of any organization need continual adjustment to assure continued success. As the situation external to the organization changes, so must the objectives be adjusted to meet those conditions. As the older veterans leave the college and their places are taken by younger students the objectives will undoubtedly need a shift of emphasis to serve the common purpose of the new members. The replacement of veterans with younger members without an accompanying shift in objective emphasis may well be a factor in the present state of success of the A.I.I.E. as a large portion of the veteran enrollment has been replaced. The veterans believed the social activity goal to be of greatest importance, while the younger students desire more knowledge of the industrial engineering field and have not become aware of the social activity goal。

The definition of objectives is one of the officers＇functions．When the AoI．I。E．membership began to decrease a goal of increased membership should have been defined by the officers，and assigned a priority．In January a large group of seniors were graduated from the A．I．I．E．g and since that time no concerted effort has been made，or goal established，to replace this group． Any organization which does not replace its losses is headed toward ex－ tinction．The members realized this for 27 per cent objected to the decreasm ing number of members．A determined membership drive to replace losses should be undertaken．In the drive for members it must be remembered that a closely integrated efficient organization is in itself an incentive for cooperation． The A．I．I．E．had an average attendance at meetings of about 50 per cent of the membership．A drive to supply the incentives，or remove the objections， of the inactive members probably could have increased the attendance to 85 per cent．Thus if the A．I。I。E．had so desired it might have developed an efficient organization from the members it possessed．However，the post－ ponement of a membership drive can only make the task more difficult as time passes．

The officers should delegate to committee chairmen as much authority for meetings，social functions and activities as possible，retaining only the control necessary for supervision and coordination of the various chairmen． This will relieve the officers for the performance of the other functions as given in this chapter．

The discrepancy between the objectives given in the A．I．I．E．constitution and the objectives as viewed by the officers appears to indicate a shift of emphasis from the promotion of understanding of industrial engineering princie ples and dissemination of technical information to the cultivation of fraternal feeling．It is the belief of the investigator that this was not so
much a shift in emphasis as a fundamental difference of opinion between the local $A_{0}$ I.I.E. and the national organization from whom the local received its constitution.

## CHAFTER IV

THE MEMBERSHIP

The organizational purpose from the members viewpoint. The members conception of the organizational objectives of the A.I.I。E. was in very close agreement with those given by the officers on page five. Social interactions and association among industrial engineering students was given as an objective by 100 per cent of the members. Dissemination of technical information was given as an objective by 47 per cent of the members. Promotion of a better understanding of industrial engineering principles was given by 41 per cent of the members. Coordination of the industrial engineering students ${ }^{\text {p }}$ activities was believed by $35^{\prime}$ per cent of the members to be an objective. Thus the agreement between the officers and the members as to the objectives of the organization and the emphasis on each was exceptional. This agreement afforded the officers an excellent opportunity to make the organization appeal to the membership. Common purpose or objective is one of the three basic conditions for continuing successful cooperationg and the A.I.I.E. certainly had that common purpose among its cooperatorso.

The survey revealed that the non members conceived the purposes of the organization to be essentially the same as those given by the officers, with social contacts and dissemination of technical knowledge of primary importance. The non-members beijeve greater emphasis should be given to dissemination of technical knowledge and that an attempt should be made to provide more informal relations between the faculty and the students.

It is now obvious that the members $s_{\mathcal{S}}$ the officers, and the constitation are in basic agreement on the organizational objectives. Therefore, no changes need to be made in either the officer's or the constitution's objec*
tives. The differences in emphasis will likely be reduced, for the members requested more emphasis on the dissemination of technical knowledge objective. The objectives of the A.I.I.E. all meet the criteria as established in chapter II, page six. All the objectives were in some degree suceptible of accomplishment. The A.I.I.E. replaces its personnel about every two years and it must then began anew on most of the objectives. The survey indicated that the members were in agreement with and supported the objectives. The social and future aspects of the group of organizational objectives were satisfied by the social interaction and the dissemination of technical knowledge objectives.

The members individual purposes. The members of the organization had each entered into the cooperative effort for a number of reasons. These reasons or purposes were the incentives which had drawn the cooperator into the organization and did not necessarily coincide with those of another cooperator or those of the organization. Social contacts were reported by 94 per cent of the members as an incentive for cooperation. Technical knowledge of the industrial engineering field was a desire of 66 per cent of the members. Prestige as an assistance in securing a job was an incentive for 55 per cent of the members. Prestige was reported to be an incentive for 24 per cent of the members. These statistics indicated the value of social contacts, knowledge of the industrial engineering field and the assistance in securing a job to be the main incentives which should have been offered to non-members to induce them into cooperation.

A survey of the non-members indicated that the individual purposes the non-member would want to have satisfied if he were a member are essentially the same as those of the members with the emphasis on social contacts, knowledge of the industrial engineering field, and the prestige that would
come from association with a well known organization. They had no suggestions as to how the $A_{0}$ I.I.E. might better serve their interests.

Further investigation indicates the presence within the A.I.I。E。of a group whose primary purpose in membership was adding another organization to the list of which they are members. They felt that a list of such organizam tions furnished them prestige and assistance in securing a job. Seventy-five per cent of the members who mentioned assistance in securing a job were inactive members. The officers of the $A_{0} I_{0} I_{.} E_{0}$ were not aware of this group and there has been little effort made to induce them to become more active.

No major discrepancies were discovered between the purposes of the active and inactive member groups except that the active group was interested in participation and activity within the $A_{0} I_{0} I_{0} E_{0}$ and in gaining organizational experience. None of the inactive members were interested in these purposes. Both the officers and the members believed that informal contact with the faculty was a major purpose of many members.

The survey demonstrated that the purposes of the members are not necessarily the organizational purposes. The members believed coordination of student activities and a better understanding of industrial engineering principles to be organizational objectives and yet none felt them to be personal purposes. Likewise no one gave organizational experience or particio pation as organizational objectives, yet they were personal purposes.

The incentives for cooperation. In the previous section the purposes or desires of the individuals were developed, and in this section the incentives offered to the individual will be set forth. The incentives that are offered to the individual determine in each case his response, his output of effort, and his willingness to serve. These affect the effectiveness and success of the organization. Therefore, it is of prime importance that the correct
incentives be offered to secure that necessary cooperation.
The survey indicated that the officers and members were in accord as to the incentives being offered to non-members to induce them to become members. The incentives offered are, in order of importance, social contacts, activity and participation, a knowledge of the industrial engineering field, and organizational experience. A survey of the nonmembers indicated they did not feel the organizational experience incentive, and believed more emphasis was placed on participation and activity as an incentive than the officers and members reported. The non-members believed that informal contact with the faculty was offered as an incentive, thus indicating a lack of communication. Informal faculty contact was not offered as an incentive for the faculty did not attend meetings frequently。

In the previous section it was shown that the three main incentives for non-members were, in order of importance, social contacts, a knowledge of the industrial engineering field, and assistance in securing a job. To these should now be added informal faculty contacts. These four incentives are the principle ones which should be used in securing new members. of these four incentives only two, social contacts and a knowledge of the industrial engineering field, are consciously offered by the organization. The incentive of a knowledge of the industrial engineering field as offered by the organization was rather ineffectual.

The officers and members are in close agreement that the incentives offered to secure greater effort from the members were recognition, organizational experience, prestige, and participation, with social contacts barely mentioned. There was a demand by more than 50 per cent of the members for a greater knowledge of the industrial engineexing field but less than 20 per cent of the members believed it was offered as an incentive.

The active members gave much more emphasis to the recognition, prestige. and the organizational experience incentives than did the inactive members. If the inactive members responded to these incentives they would undoubtecily have become active as these were offered by the organization. Thus the inculcation of these motives on the inactive members might induce them to become active and the A.I.I.E. would need to expend only those incentives it already possesses.

There are negative incentives that affect the non-members and to a certain extent the inactive members too. Those negative incentives are the reputation the A.I.I.E. is acquixing as an unsuccessful organizationg the low morale of the members, a large percentage of whom feel the organization to be rather low on a scale of success, and the rumors that the meetings accomplish nothing of importance. These negative incentives repel the prospective new member and tend to prevent the inactive member from becoming active. The purposes that were fulfilled and the incentives that were effective will be developed in the following section.

Satisfactions received by the members. An organization may feel that it is furnishing many satisfactions through its incentives, however the criterion of those satisfactions must be the members feelings.

The members received the most good from social contacts, organizational experience, a knowledge of the industrial engineering field, participation, and activity. Social contacts have appeared to the members as the largest motivating force because they received the most satisfactions from them. Participation and activity were of next importance as a source of satise factions for the active members. A knowledge of the industrial engineering field was the source of some satisfactions, principally for the inactive members. The inactive members received satisfactions only from social
contacts and a knowledge of the industrial engineering field. The officers are in agreement with the members as to the source of the satisfactions excepting the knowledge of the industrial engineering field. Only 12 per cent of the active members received satisfaction from this incentive, but 80 per cent of the officers believed members received satisfaction from it.

The social aspect of the objectives are being achieved but the future aspect needs more attention. More emphasis should be placed on securing capable outside speakers or moving pictures on the industrial engineering field. The investigator recommends the appointment of two program chairmen, one to plan each alternate meeting. The task of securing speakers or interesting material for each meeting is tremendous, but with two program chairmen, coordinated by the vicempresidents programs may be assured which will help the inactive members to become more active and will induce more non-members to participate.

Use of persuasion. When the incentives available to an organization fail or are not what a cooperator desires, a technique known as persuasion should be brought into operation. Persuasion may educate or train the cooperator to desire the available incentive or may rationalize opportunities for him.

The officers were in direct conflict with the mernbers and nonmembers, on the use of persuasion. The officers report persuasion was used while the members and nonmembers report it not used. The investigator did not find persuasion employed in any of the meetings. This indicates that the officers did not know how to use persuasion as an incentive toward cooperative action.

Persuasion in an organization such as the A.I.I.E. consists of a changing of attitudes. This is accomplished through use of propaganda at meetings and personal selling in informal conversation. The members' attention must be directed to the advantages they receive from greater effort, and the non-
member＇s attention to the advantages，to him，of membership in the organia zation．It might be well to emphasize the importance employers attach to the leadership ability displayed by those who are sufficiently active to become an officer，the future value of the social contacts established，and the feeling of accomplishment of a job well done．

One area where persuasion needs to be employed is on those inactive members who joined primarily for the prestige value in securing a job。 These members do not value the other incentives furnished by the A．I。I。E．and refuse to put forth any greater effort．Persuasion，properly employed，could motivate these members to value or desire the incentives available to the organization，and they wrould then become more active．In the A．I．I．E． persuasion might best be applied to secure more effort from the members first，and then applied through the members to non members in securing more members．

## CHAPTER V

## CONCLUSIONS

The elements of organization are (1) communication; (2) willingness to serve; and (3) common purpose. ${ }^{1}$ Upon this basis the conclusions were drawn. The A.I.I。E. was found to be ineffectual in communication. This weakness extended to both formal and informal communication. The informal communications were poor for the members and officers simply do not talk about the A.I.I.E. outside the meetings. The formal communications were very poor due to a lack of planning until the publication of the newsletter began. The need for better communication can be met by better selection and training of the officers. The use of a nominating committee is recommended for the better selection of officers. A line of succession to the presidency is recommended to furnish training for that important office. The constitution should be amended to define the duties and functions of the officers as a guide for the officers. The decentralization of authority wherever possible is recomended to allow the officers more time for the maintenance of organization duties.

Willingness to serve was the weakest link in the chain of elements for the $A I_{0} I_{0} E_{\text {. }}$ The organization has been unable to furnish satisfactions to $a$ sufficient number of cooperators. Although the organization was effective it was not found to be efficient. The A.I.I。E. was found to be effective on all objectives except that of dissemination of knowledge of the industrial engineering field. The cause of the lack of efficiency is that very little planning was done for the meetings. The importance of the meeting cannot be
${ }^{1}$ Chester I. Barnard, The Functions of the Executive, p. 82.
over estimated as most members can think of the organization only in terms of the meetings. Until the member undertakes additional activity within the A.I.I.E. the meeting is the organization; he thinks of nothing beyond or behind that two hours every two weeks. Planning of both the business session and the entertainment portion of the meetings are necessary. The members did not receive the information on the industrial engineering field they wished to have because there were not enough outside speakers presented. There were no reports presented to the meetings on activities worthy of note in the industrial engineering field. This problem will be difficult to alleviate as it is more work than one student wishes to undertake.

The investigator recomends the appointment of two program chairmen to handle alternate programs. These program chairmen should be coordinated and assisted by the vice-president. The planning of the business session and the length of the meeting can only be determined by officers' meetings prior to the member meetings. As the officers begin to plan the meetings and to rebuild the membership of the A.I.I.E. it should be remembered that the primary effort should be directed at inducing the inactive members to become active and the secondary effort at securing new members. A large organization is not necessary if the members are active in the small organization.

There are two groups of incentives which should be emphasized in securing willingness to serve the organization. First, to secure the cooperation of non-members the four most desirable incentives are social contacts, a knowledge of the industrial engineering field, assistance in securing a job, and informal faculty contacts. Second, to secure greater effort from the members, organizational experience, prestige, recognition, and participation should be emphasized.

An indirect incentive which should be emphasized in the organization
is that of activity, any activity. The members and nonmembers must be encouraged to accept it, but when activity has begun it becomes a powerful incentive for further cooperation.

An area which would stand further research and study was uncovered in the inactive member group. The principal portion of the inactive group were those "joiners" who desired the prestige of belonging to the organization and the assistance such membership could give them in securing a job. Yet this same group did not recognize prestige as an incentive by the organization for greater effort within it。

Common purpose was the one element on which the A.I.I.E. needed no marked improvement. The officers and members understood each other very well as to the objectives of the organization. It was only in the emphasis placed on the various objectives that there was any disagreement at all. The objective of knowledge of the industrial engineering field could well receive more of the officers' attention. It is indeed fortunate that the A.I.I.E. has the common purpose so well understood. The common purpose is a firm foundation on which to reconstruct the organization.

Cooperation is very difficult to achieve. As Barnard ${ }^{2}$ has so aptly put it, "But in $f^{\text {fact }}$ g successful cooperation in or by formal organizations is the abnormal, not the normal, condition." The recomendations and criticisms of this study are offered in the hope that they will assist the organization in the achievement of its objectives, and not with the intention that the organization should become perfect.
${ }^{2}$ Ibid. ${ }^{\text {p. } 50}$

Barnard, Chester Io The Functions Of The Executive. Cambridge, Massachusetts: Harvard University Press, $1948{ }^{\circ}{ }^{296}$ pp.

Hancock, John M. "Report On Organization Of The American Chemical Society。" Chemical and Engineering News, 25:442, February 17, 1947.

Roethlisberger, F. Jo Management And Morale. Cambridge, Massachusetts: Harvard University Press, 1947. 194 pp.

Simon, Herbert A. Administrative Behavior. New York: The Macmillan Company, 1949. 253 pp.

Whitehead, ToNo Leadership In A Free Society. Cambridge, Massachusetts: Harvard University Press, 1947. 259 ppo

Constitution of The Oklahoma Ao And M. Chapter Of The American Institute Of Industrial Fngineers o 3 pp 。

## APPENDIX

## Questions Asked the Members

1．What is the objective or purpose of the $A_{0} I_{.} I_{0} E_{0}$ ？
2．Does the A．I．I．E．reach its goals frequently，seldom or not at all？
3．What were the main reasons why you first joined the A．I．I．E．？
4．What part of the A．I．I．E．have you received the most good from since you joined？

5．What things about the AoI．I．E．do you dislike most of all？
6．Can you think of any ways that the A．I．I．E．could be of more help to you？
7．What should be the main activities of the A。I。I。E．？
8．Do the members seem to have much control over the organization or do the officers run it about as they wish？

9．If you had your way would you make any changes in the way the society is run？（What changes？）

10．Do you feel that membership in the A．I．I．E．might help you in securing a job？（How？）

11．Do you always get the＂word＂on special events？
12．From what you know，do you think the officers are doing a good job，a fair job，or a poor job？

13．About how many paid up members are there？
IH．Did the A．I．I。E．operate last semester at a loss or a gain financially？
15．In what way does the national organization help the student organi－ zation？

16．What more might the national organization do to help the student organi－ zation？

17．What goals have the A．I．I．E．set up for itself for this semester？
18．Do you know of any internal friction or political cliques within the A．I．Io $\mathrm{E}_{0}$ ？

19．What incentives are offered to students to induce them to become members？
20．Does the A．I．I．E．try to coerce or persuade members toward greater effort？

Questions Asked the Members (continued)
21. What incentives are offered members to induce them to put forth greater effort?
22. Do you pay much attention to the way the $A_{0} I_{0} I_{0} E$. is run?
23. Do you read the magazine and newsletter regularly, seldom, or never?
24. Do you attend meetings regularly, infrequently, or not at all?
25. Why is it that you do not attend more frequently?
26. What do you think could be done to improve the meetings?
27. Please give me an estimate of your grade average.
28. What field of work or type of industry do you intend to enter?
29. Do you have any remarks you wish to make about your feelings toward the organization or any suggestions which might aid the organization?

## Questions Asked the Officers

1．What is the objective or purpose of the AoI．IoE．？
2．Does the $A_{0} I_{0} I_{. E}$ reach its goals frequentiy，seldom，or not at all？
3．What were the main reasons for most students joining the AoI。I．E．in the first place？

4．Do the members seen to have much control over the organization，or do the officers run it about as they wish？

5．If you had your way would you make any changes in the way the society is run？（What changes？）

6．What part of the $A_{0} I_{0} I_{0} E$ ．do the members receive the most good from？
7．What things about the AoI．IoE．do you dislike most of all？
8．What goals have the A．I．I。E。 set up for itself for this semester？
9．What should be the main activities of the A．I．I．E．？
10．What is the main function of the officers of the A．I．I．E．？
11．Do the members always get the＂word＂on special events？
1．2．About how many paid up members are there？
13．Did the AoI。I。E．operate last semester at a loss or a gain financially？
14．In what way does the national organization hel．p the student organization？
15．What more might the national organization do to help the student organm ization？

16．Do you know of any internal friction or political cliques within the AoI。I。E．$?$

17．What incentives are offered to students to induce them to become members of the AoI。I。E。？

18．What incentives are offered to members to induce them to put forth greater effort？

19．Does the A．I．I．E．try to coerce or persuade members toward greater effort？

20．Can you think of any ways that the A．I．I．E．could be of more help to the members？（How？）

21．Do you atterd meetings regularly，infrequently，or not at all？
22. What do you think could be done to improve the meetings?
23. How might the members best assist the officers in building a better organization?
24. Do you think the other officers are doing a good job, a fair job, or a poor job?
25. Please give me an estimate of your grade average.
26. What field of work or type of industry do you intend to enter?
27. Do you have any remarks you wish to make about your feelings toward the organization or any suggestions which might aid the organization?

## Questions Asked the Non - Members

I．What is the objective or purpose of the $A_{0} I_{0} I_{0} E_{0}$ as a student organio zation？

2．Do you know whether the A．I．I．E．achieves its goals frequently，seldom， or not at all？

3．What should be the objectives of the A．I．I。E．？
4．Do you know of any ways that the A．I．I．E．could be of more use to you？ （How？）

5．What things about the A．I．I．E．do you dislike most of 211 ？
6．If you had your way would you make any changes in the way the society is run？（What changes？）

7．How many of the officers do you know？How many of the members do you know？

8．About how many members are there in the AoI。I。E．？
9．What nights are meetings held？
10．Do you hear that the meetings are good or rather poor？
11．What is the general concensus of opinion concerning the A。I．I．E．？
12．What incentives are offered to students to induce them to become members？
13．Does the A。I．I。E．try to coerce or persuade students to become members？
14．Why is it that you are not a member？


[^0]:    1
    Ibid., p. 259

