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**An Internal Marketing Perspective on Accelerating the Diffusion of
Innovation in Practical Engineering Education**

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Key words:

Active learning, internal marketing, diffusion of innovations, Rogers’ model, satisfaction, motivation, communication.

INTRODUCTION

Improving student achievement is one of the main goals of educational institutions. Students in practical engineering colleges (PE) identified as students with limited abilities. Traditional tutoring and learning methods seem to be unsuited to practical engineering studies. Traditional teaching techniques that based on a pre-set syllabus and frontal presentation, did not take into account the students' needs. In traditional teaching methods, the course divided into three components: lectures, practice, and laboratory work, and there is usually no synchronicity between them. Moreover, each component is taught by different teachers (Maharshak and Pundak 2003). This traditional approach does not support the students' abilities.

Education institutes have the students as their external customer. The teachers are employees of the institute that give service to the students. This service includes knowledge transfer. Institutes looking for new teaching methods that improves the service toward the external customer (the students). There are innovative learning methods that have some implementation problems especially within the teachers. Implementing internal marketing techniques can eliminate the barriers and improve adopting the innovative teaching methods.

ACTIVE LEARNING

Active learning is an active process in which learners are engaged in the learning process, rather than "passively" absorbing lectures (Horvath 2004, Graaf 1999, Bonwell 1991). Activation can be achieved through a variety of simple activities such as reading, writing, discussion, solving problems, analysis, synthesis, and evaluation.

There is good evidence that active learning methods can improve student achievement (Cotner 2013), but research (Pundak,2010, Henkel, 2005)), has consistently shown that traditional lecture methods dominate college and university classrooms, and that many academic staff members prefer using traditional teaching techniques (Pundak and Rozner 2007). Although student achievement is not satisfactory, Pundak (2010) and Henkel (2005) founded that many experienced teachers continue to use traditional teaching methods.

Changing traditional methods and shifting toward new and innovative teaching methods demands some effort investment to develop new learning materials, integrate modern technologies, and avoid unexpected conditions (Zellweger 2005).

Previous studies on active learning sought to explore the influence of implementing active learning methods on student achievement (Freeman 2014, Cotner 2013) , and the motives that encourage teachers to adhere to traditional learning methods, rather than shift to active learning methods.

Henkel (2005) wondered why teachers continues to be based on traditional teaching methods, year after year, despite disappointing achievement. Zellweger (2005) stated that changing these methods demands that these teachers invest effort to develop new learning materials, integrate modern technologies and confront unexpected conditions.

Geoghegan (1994) pointed out that the “unwillingness to take risks” is the major reason for adopting active learning methods. Teachers may suspect losing control and thus fail to achieve the desired results. Also Bonk (2002) find out that teachers often experiences a threatening feeling of uncertainty, face the fact that they have to change their role in the classroom. In this case, the resistance to change is used to reduce one's feeling of inadequacy and to minimize the resulting conflict, as much as possible.

Braskamp (1984) find out another reason for unadapting new innovative learning methods: “Justification of previous decisions”. This phenomenon is known well in decision-making processes. Teachers tend to continue to use their old teaching techniques, trying to prove that their original decisions were correct, Otherwise they should change these methods and “start from scratch” to learn a new teaching method.

The tendency to imitate the traditional teaching methods, is another barrier that discussed by Donald & Denisom (1996). These traditional teaching methods are based on “the final exam” as the main component of a student's evaluation in a given class. Heller (1992) find out that processes that occur during the semester in traditional teaching are a much less valued component of the student's performance. In active learning methods, these activities have a major value and have to be planed and evaluated by investing some efforts.

Burke (1987) fined out that the reluctance to adopt teaching innovations is also related to the professional development of the instructors. He indicated that professional

development occurs in three cycles: Induction, Renewal and Redirection. The first cycle – induction – is characterized by worries and attempts to survive (Huberman 1993).

Niemi (2002) conducted a research in which 332 teachers and 80 pupils were interviewed. Niemi found out that a major six factors which prevent teachers from moving on into active learning methods:

- Lack of time needed to complete all the defined materials in the curriculum.
- Teaching in large groups prevents activating students.
- A shortage of study materials must be used in active teaching.
- Resistance to changes after teachers have developed teaching methods suited to their capabilities and experience.
- A lack of meta-cognitive skills and motivation on the part of the students. The instructors feel that students prefer traditional learning.
- Among high school teachers, parental opposition to change was also mentioned.

Scheyvens, Amy, & Griffin (2008) find out a common issue between teachers and students that prevents adopting active learning techniques, it demands more work from both instructors and students than traditional teaching.

DIFFUSION OF INNOVATIONS – ROGER'S MODEL

Some educational researchers tried to explain the process of adopting new innovative methods by using Rogers' model of diffusion of innovations (Sofer 2010, Shea 2005, Surry 2005, Medlin 2001, Harris 1994, Ely 1990).

Carpenter (2010, p. 1) defined innovation as "A **change** in a **product** offering, **service**, business **model** or **operations** which meaningfully improves the experience of a large number of **stakeholders**". Each part of the definition reflects a specific aspect of innovation. That definition combined of 3 elements: Change, Product or Service, Stakeholders.

Rogers' definition contains four elements that form the diffusion of the innovation process:

- (1) *Innovation* - an idea, practices, or objects that are perceived as known by an individual or other unit of adoption (Rogers 2003, p. 12).

- (2) *Communication channels* - the means by which messages get from one individual to another (Rogers 2003, p. 18).
- (3) *Time* – which includes 3 factors: (a) Innovation-decision process, (b) Relative time with which an innovation is adopted by an individual or group, and (c) Innovation's rate of adoption.
- (4) *Social system* - a set of interrelated units that are engaged in joint problem solving to accomplish a common goal (Rogers 2003, p. 23).

Diffusion of an innovation can occur through 5 phases, which can be considered as a type of decision-making process:

- *Knowledge* – During this phase, the individual attempts to determine “what the innovation is and how and why it works” (Rogers, 2003, p. 21).
- *Persuasion* - During this phase, the individual attempts to get some attitude towards the innovation. “The formation of a favorable or unfavorable attitude toward an innovation does not always lead directly or indirectly to an adoption or rejection” (Rogers, 2003, p. 176).
- *Decision* – During this phase, the individual has to get a decision to adopt or reject the innovation. The adoption means a “full use of an innovation as the best course of action available” (Rogers, 2003, p. 177).
- *Implementation* - During this phase, the individual starts using the innovation on a regular basis. There is some uncertainty about the outcomes of the innovation, and some technical assistance is needed at this phase to reduce the degree of uncertainty.
- *Confirmation* - During this phase, the individual continues using or rejecting the innovation on the basis of evidence benefits or drawbacks. He still looks for support for his/her decision. The decision can be reversed if the individual “exposed to conflicting messages about the innovation” (Rogers, 2003, p. 189).

Rogers (2003) classified adopters into five categories: *Innovators*, *Early Adopters*, *Early Majority*, *Late Majority*, and *Laggards*. This classification is based on the innovativeness of members of a social system.

Rogers' diffusion of innovations theory is the most appropriate for investigating the adoption of technology in higher education and educational environments (Medlin 2001). This theory, "provides an appropriate model for the empirical study that seeks to further identify a larger set of variables that might influence the innovation diffusion and adoption process" (Medlin 2001, p. 2).

We use this model in the current research just to check the rate of adoption and not as a base for accelerating the rate of adoption.

To accelerate the adoption process of active learning we used internal marketing approach.

INTERNAL MARKETING

Berrys' concept of internal marketing was described as "viewing employees as internal customers, viewing jobs as internal products that satisfy the needs and wants of these internal customers while addressing the objectives of the organization" (Berry, 1981, p. 25). The customer, which is the employee cannot choose the products which defined as the jobs which are determined by the organization (Pervaiz & Mohammed, 2002). According to the classical theory of marketing, the organization can define one customer (Kotker, 2006) and that made some conflict with the internal marketing concept.

The internal marketing concept had started in the field of service that have to get better service quality toward the external customer (Pervaiz & Mohammed, 2002). Gronroos (1981) considered the service given to the external customer as a "buyer-seller" activities and later (1985) include "*marketing-like activities*" to his implementation tools. Later Pervaiz and Mohammed (2002) adopted Gronroos approach and emphasizes the issue of employee-customer orientation.

Gronroos (1985) emphasizes that achieving organization goals, can be done by focusing in the employees. Winter (1985) concentrated also on the employees as the main element in implementing organization strategy change: "Aligning, educating and motivating staff towards institutional objectives, the process by which personnel understand and recognize not only the value of the program but their place in it" (Winter, 1985, p. 69).

Piercy & Morgan (1991) stated that external marketing techniques and tools can be used for implementing internal marketing. They also define the relations between: Organization,

Customers, and Employees. This model shows how organization can satisfy their external customers, not only by using external and relationship marketing techniques, but also by using internal marketing within their employees. The internal marketing model includes elements such as: Motivation, Customer Orientation, Co-Ordination, and integration. Pervaiz & Mohammed (2002) explain that using the employees for achieving better service toward the external customer (organization goals) is an extremely change. They emphases that using the new model can be used as a mechanism to overcome resistance to change which becomes to achieve better goals. According to that, internal marketing strategy can be used in all organizations and not only in service organizations. Pervaiz & Mohammed (2002) summarized that by the definition: "Internal marketing is a planned effort using a marketing-like approach directed at motivating employees, for implementing and integrating organizational strategies towards customer orientation".

The above definition includes five main elements: (1) Employee motivation and satisfaction, (2) Customer orientation and customer satisfaction, (3) Inter-functional co-ordination and integration, (4) Marketing-like approach, (5) Implementation of specific corporate or functional strategies (Pervaiz & Mohammed, 2002).

Pervaiz and Mohammed (2002), explained the basic models of internal marketing based on Berry's and Gronroos's approaches. They introduce, later, a researchable model that includes all 5 elements included in their definition of internal marketing. This model emphases using marketing-like approach, customer orientation, and service quality concepts to get customer satisfaction. Later, Pervaiz and Mohammed (2002) introduce a practical model which they call "A Multi-Level Model of Internal Marketing".

Implementing a new strategy can be done by 4 major stages: Environmental analysis, Strategy formulation, Strategy implementation, and Strategy evaluation. Environmental analysis should evaluate all parameters concerning the external customer, organization structure, organization resources and organization competitors (Coulter, 2005). The internal analysis can identify the firm's strengths and weakness, and the external analysis reveals opportunities and threats.

The strategy formulation stage includes developing a strategic vision, setting objectives, and crafting a strategy to achieve the objectives. The "Multi-Level Model" (Pervaiz and Mohammed, 2002) can be used as a practical model for STRATEGY FORMULATION.

According to the "Multi-Level Model", first, the organization has to define the goals and the changes that must be done. The organization goals define the PRODUCT. The changes that must be done, define the DIRECTION (Pervaiz and Mohammed 2002). In the second level of the model, the organization has to pick up the preferred changes. The organization should run out an internal marketing research during the stage of defining the PATH (Pervaiz and Mohammed, 2002). All the parameters such as who is going to do the changes, and how to do that should be taken. Segmentation techniques and methods from the traditional marketing discipline can be used to answer the question "who" is going to "do". At the last level, which called the ACTION, the organization has to craft an operational plan that helps to achieve the organization goals. Marketing-like tools can be used after defining the PROCESS for positioning the PRODUCT. Pervaiz and Mohammed (2002), stated the "Internal positioning aims to create a tactical package of actions so as to overcome identified barriers, as well as fulfilling employee needs" (p. 40).

Most internal marketing researches pointed out that "to have satisfied customers, the firm must also have satisfied employees" (Akroush, 2013, p. 307). Satisfaction is one of the factors important in influencing employee behavior (Arnett, Laverie, & McLane, 2002). When individuals are satisfied with their job, they will feel more responsibility to support the organization (Chih-Lun, 2012, p. 1437). Motivation is the main key to get satisfied employees (Helman, 1992). Mullins (2013) define motivation as "a driving force within a person which stimulates the individual to do something up to the target level in order to fulfill some need or expectation". Kressler (2003) emphasizes "that motivation is a complex issue of human behavior which varies from person to a person; as a result, different people are motivated in different ways". Motivation can determine the People's behavior, but their performance can be affected by both ability level and motivation (Mullins, 2007).

Motivation theories were developed to identify the factors of motivation that influence human behavior, which can be divided into two broad categories: content theories, and process theories (Hossain, 2012).

The concept of marketing become so useful in schools and universities (Kotler and Fox, 1995). So many parameters cause accelerating the marketing use at education institutes: competition, demographic trends, branding, globalization, technology, government funding policy. To survive on the new environment, education institutes have improve their

service by crafting a new strategies. Internal marketing approach is the appropriate for implementing the change and survive.

A school performs services, which have all the characteristics of commercial services. Schools are operating in a competitive environment and have to improve their efficiency and effectiveness efficiency, which can be achieved by using internal marketing techniques.

Marketing in education started in the late 1980s. A number of studies and papers were published at that period: Gray (1991), Marland & Rogers (1991), and Barnes (1993). Kotler and Fox (1995) discuss the issue of marketing educational institutions, and try to fit the classical business marketing techniques to education field.

Internal marketing is mostly used in profit service systems. Straughan and Cooper (2002) considered teachers as customers, where “the job experience itself, is a service that is designed and delivered to internal customers – all teachers of an organization – and the internal customer satisfaction derived is a function of the quality of the internal marketing efforts of that organization” (p. 253).

Chih-Lun (2012) emphasis that “job satisfaction of teachers is directly related to the quality of teaching provided in the classroom” (p. 1437).

Keller (2002) find out that “if management wants its teachers to do a great job with customers, then it must be prepared to do a great job with its teachers” (p. 651). Therefore, “the concept of internal marketing might be as valuable for schools as it is for businesses and other service organizations” (Chien & Chin, 2012, p. 1436). Keller (2002) emphasis that internal marketing-mix, the elements that are needed to satisfy internal customers’ needs, should be considered. He claimed that a special emphasis is to be on the strategies and techniques which can and need to be used in order to satisfy teachers’ needs.

Chien & Lin (2002) found that organizational support can improve teachers’ performance, the emotional attachment to the school.

Rafiq & Ahmed (2000) discuss five needs which internal marketing is focused on:

- The need to take an interest in teacher motivation and satisfaction;
- The need to be oriented towards teachers and the satisfaction of customers;
- The need to promote internal coordination and connection;
- The need to adopt marketing thinking;

- The need to present the specifics of an organization with a formal strategy.

In schools, these needs are relevant, as well. Therefore, the concept of internal marketing might be valuable for schools, as well as for other service organizations.

RESEARCH CONCEPTUAL FRAMEWORK

The current research combined three main theories: Active Learning, Diffusion of Innovations, and Internal Marketing.

According to Miles and Huberman (1994), conceptual frameworks may be commonsensical or theory driven. The conceptual framework for this study was formulated by using common sense and Internal Marketing theory which derived due to more than 8 years of experience in the field of active learning. It was proved that active learning methods can improve students' conceptual understanding and thinking skills. However we can notice that most lecturers in education institutes still adhere to traditional teaching methods.

The active learning process involves three major stakeholders: the students, the lecturers, and the institutes. In this current research, we are not dealing with the students group. The benefit of active learning was discussed during the past few years (Bonwell C. C. 1991, Felder, Woods et al. 2000, McCarthy and Anderson 2000, Hinde and J. 2001, Marzano, Pickering et al. 2001, Hattie 2009). All the researches prove that active learning can improve the students' achievements.

We can find through the years that institutes made major efforts in adopting active learning (Ehrmann, Gilbert et al. 2006, Beichner 2007, Pundak, Rozner et al. 2008, ALE 2011, NCSU 2011, Todd 2011). Unfortunately, not all the efforts were successful. Most academic instructors tend to adhere to traditional teaching methods (Pundak and Rozner 2007). Many researchers pointed out the barriers that prevented lecturers from adopting active learning (Braskamp, C. et al. 1984, Heller, Keith et al. 1992, Geoghegan 1994, Niemi 2002, Zellweger 2005). Lecturers can't overcome these barriers alone. Therefore the involvement of the institutes' management is also very important in this process.

The institutes' management (the organization) has one customer, the student. The teacher is the employee of the organization who gives his service to the organization customer (the student). To improve the service delivery of the lecturers, the organization has to define

the employee as an internal customer (Pervaiz and Mohammed 2002). Our model describes the inter-functional processes between the 3 stakeholders (institute, student, and teacher) involved in the active learning process. The institute can deal with the customers (students) by way of external marketing and relationship techniques. The institute can use internal marketing techniques towards the lecturer to improve the service to the students. These internal marketing techniques can focus on strengthening the motivation, satisfaction, and customer orientation of lecturers and improve communication with them (Pervaiz and Mohammed 2002).

Adopting active learning methods involved change. Ahmed & Rafiq (1993) defined internal marketing as a plan that helps overcoming organizational resistance to change. For implementing internal marketing in the current research we adopt the multi-level model of internal marketing developed by Ahmed & Rafiq (2002).

According to this model, a new organization strategy (policy) was crafted and defined as the product which is marketed to the teachers. The new policy was built according to a survey that investigated the reasons behind resistance to change.

Active learning is an innovation. In our research we adopt Rogers' model for diffusion of innovation which is the widespread wide model in this area (Surry 1997). We use the model to understand the process of adopting innovation and measuring its rate.

In this research, we take the stance that in internal marketing, teachers are considered to be the customers of the school. If so, schools need to pay attention primarily to the teachers, their needs, attitudes and values, and seek to satisfy them as much as possible. The underlying assumption is that satisfied internal customers/teachers can better serve external customers, primarily students and parents.

PURPOSE OF THE RESEARCH

The main purpose of the study is to **verify if internal marketing techniques can improve and accelerate adopting innovative teaching methods.**

Secondary purposes are to determine:

- (1) The relationships of teachers' status / teaching experience and perception of innovative learning methods,
- (2) The attitude of teachers concerning active learning methods,

- (3) Any differences between practical engineering teachers' attitudes and the academic teacher staff regarding active learning,
- (4) The effect of implementing a new internal marketing strategy toward adopting innovative teaching methods,
- (5) The effectiveness of internal marketing strategy on employee satisfaction and motivation,
- (6) The relation between teachers' satisfaction and students' satisfaction.

RESEARCH QUESTIONS

Data analyzing and processing should answer the following major questions:

- 1) What is the relationship between teacher's status (full-time and part-time teachers) and perceptions of active learning?
- 2) What is the relationship between teachers experience and perceptions of active learning?
- 3) Can teachers activate students in large classes?
- 4) Can teachers influence the students' involvement in the course?
- 5) Can teachers influence the understanding of materials?
- 6) Can students develop their knowledge?
- 7) Do teachers have to stick to the syllabus and finish all the materials as defined?
- 8) Can teachers play a role of instructor rather than knowledge transferor?
- 9) Is there any gap, and if so how large, between the attitudes of the practical engineer teachers and the attitudes of the instructors in academic institutions regarding active learning?
- 10) What tendencies do teachers show in adopting active learning methods?
- 11) Does internal marketing accelerate adopting new innovative teaching methods?
- 12) Does internal marketing improve teachers' satisfaction?
- 13) Does internal marketing improve teachers' motivation?
- 14) Does internal marketing improve organization inter-communication?
- 15) Does teachers' satisfaction improve students' satisfaction?

RESEARCH HYPOTHESES

Pursuant to the literature review and the research questions, the following hypotheses are developed to meet the research objectives:

- **Hypothesis 1**: Part time teachers tend to adopt innovative teaching methods more than full time teachers.
- **Hypothesis 2**: Young teachers tend to adopt innovative teaching methods more than experienced teachers.
- **Hypothesis 3**: Teachers can activate students in large classes.
- **Hypothesis 4**: Teachers can influence the students' involvement in the course.
- **Hypothesis 5**: Teachers can influence the understanding of materials.
- **Hypothesis 6**: Students can develop their knowledge.
- **Hypothesis 7**: Teachers don't have to stick to the syllabus and finish all materials defined.
- **Hypothesis 8**: Teachers can play a role of an instructor rather than a knowledge transfer.
- **Hypothesis 9**: There is a big gap between the attitudes of the practical engineer teachers and the attitudes of the instructors in academic institutions regarding active learning.
- **Hypothesis 10**: Teachers have good tendencies to adopt active learning methods.
- **Hypothesis 11**: Internal marketing can accelerate adopting new innovative teaching methods.
- **Hypothesis 12**: Internal marketing can improve teachers' satisfaction.
- **Hypothesis 13**: Internal marketing can improve teachers' motivation.
- **Hypothesis 14**: Internal marketing can improve organization inter-communication.
- **Hypothesis 15**: teachers' satisfaction can improve students' satisfaction.

RESEARCH DESIGN

The research based on mixed methodology: quantitative and qualitative. We used research techniques such as survey (questionnaire), focus group, and interview. We choose to start the current research by comparing the first survey results concerning active learning with a secondary data which gathered by a previous research done by Pundak (2009). The use of a previously developed instrument was recommended by Fraenkel and Wallen (2008), who stated, "Selecting an already developed instrument when appropriate, therefore, is

preferred” (p.112). To follow this recommendation, we adopted the Active Instruction Tendency (AIT) questionnaire, which was developed by Pundak *et al.* (2009). This questionnaire is an attitude questionnaire developed specially for the purpose of revealing instructors’ attitudes towards active learning.

Our questionnaires delivered digitally by the Web and email. The data gathered were analyzed by using a statistical package (IBM SPSS 21).

Accordingly, the research was conducted in four phases:

1. Conducting a survey to map and scan the environmental parameters and comparing the survey results with the secondary data from Pundak *et al.* (2009) studies.
2. Planning a new internal marketing strategy and an internal marketing survey to check the rate of adoption of active learning and the effectiveness of the new strategy.
- (b) Running: (a) a **focus group** to discuss the barriers to adopting active learning, the validation of the new policy and the internal marketing survey; (b) an **interview** with the college principal to achieve confirmation of the new policy and validation of the internal marketing survey.
3. Distributing the new policy, implementing the internal marketing survey amongst lecturers and evaluating the results of the second survey.

RESEARCH TOOLS

Five research tools used during the current research:

1. Survey results from a previous research (Pundak 2009). This survey intend to test the teachers’ attitudes toward active learning at academic colleges.
2. Active Learning questionnaire which based on the AIT questionnaire which developed by Pundak (2009). This survey intended to Test the teachers’ attitudes toward active learning at technological colleges.
3. Focus Group, which intended to test the barriers to adopting active learning, discussing the new policy, discussing and validating the second survey.
4. Interview, which intended to test the college attitude toward active learning, and confirming the new policy and the second survey.

5. Internal Marketing questionnaire, which based on the Davis (2005) questionnaire. This survey intended to test the teachers' attitudes toward the new policy, and test the adoption rate of active learning.

In the Active Learning questionnaire, six main parameters investigated:

- 1) **Large class** – activation of a large class;
- 2) **Involvement** – student involvement in the course;
- 3) **Independence** – independent learning by students;
- 4) **Development of knowledge** – by students;
- 5) **Quantity versus understanding** – a tendency to prefer understanding of the material to full completion of the syllabus;
- 6) **Instructor role** – perception of the role of the instructor.

This questionnaire included 49 question in two parts: the AIT questionnaire, and complementary questionnaire. The questionnaire distributed to 140 teachers as a web survey using the <http://freeonlinesurveys.com> website.

The new internal marketing strategy put the teachers as the internal marketing customer of the institute. The strategy defined the institute goals, and the way to achieve these goals.

The Internal Marketing questionnaire that based on Davis (2005) questionnaire, include 4 elements: Teachers' satisfaction, Teachers' motivation, Communication, and Students' satisfaction.

This questionnaire included 16 question in two parts: the Davis' questionnaire, and complementary questionnaire. The questionnaire distributed distributed to 60 teachers by email.

Data Analysis

The questionnaire results were processed using the IBM SPSS 21 program. The data analyses included the following:

- (1) Validity and reliability analysis.
- (2) Teachers' profile analysis.
- (3) Comparison between the rankings of attitudes of teacher groups toward active learning.
- (4) Tendencies of teachers to adopt active learning methods
- (5) Rate of adoption of active learning methods.

- (6) Focus group and interview influence analysis.
- (7) Internal marketing profile.
- (8) Research questions and research hypotheses.

MAJOR FINDINGS

The main purpose of the study is to find a method for improving and accelerating the adoption of innovative teaching methods. From this, we derived secondary questions as described in the INTRODUCTION.

After analyzing the results, we can emphasize the following insights we get from the current research:

- There is no relation between teachers' experience, their status and their attitudes toward active learning. All teachers desire to improve their students' achievements and are ready to adopt any innovative teaching methods that promise to achieve this goal. From the point view of the institute, innovative teaching methods can be offered to any one of the teachers' staff.
- The institute profile (admission requirements and curriculums) is a major factor in the adoption of active learning methods. The results show that there is a gap in attitudes toward active learning between practical engineering staff and academic staff. The major gap is in the domains of quality/understanding, development of knowledge and independence. This can be explained by the admission requirements.
- There is a good tendency to adopt active learning methods, excluding teaching in large classes. Teaching in large classes seems to be the main barrier to adopting active learning methods.
- Institute management support is particularly important in the process of adopting active learning.
- Using internal marketing tools in educational institutes can improve teachers' satisfaction and motivation.
- Treating teachers as internal customers can improve the students' satisfaction (the external customers).
- Using internal marketing approaches in educational institutes can accelerate the adoption process of active learning.

CONTRIBUTION TO THE BODY OF KNOWLEDGE

As mentioned in the conceptual framework, this study includes three theory domains: **active learning**, **diffusion of innovations** and **internal marketing**. The current research did not concentrate on investigating theoretical issues in these areas. This research suggests using marketing techniques to overcome the barriers to the adoption of active learning in educational institutes. Previous research on active learning has tried to explore the influence of implementing active learning methods on the students' achievements and the barriers that prevent teachers from abandoning traditional learning methods and adopting active learning methods. Research on Rogers's model of diffusion of innovations has dealt with the analysis of the diffusion parameters of various processes of adopting innovations. It has not suggested and compared ways of implementing and adopting a change. The current research suggests a new idea of internal marketing techniques for adopting active learning methods in educational institutes. It finds that defining the teachers as internal customers can accelerate the adoption of active learning methods and improve students' satisfaction. The idea of integrating the internal marketing strategy into the process of diffusion of active learning methods, considered as an innovative idea, has proved to be effective in accelerating the rate of adoption of active learning methods.

A new internal marketing coefficient (IMC) defined in the current research that can be used to describe the inter-relation between teachers' satisfaction and motivation, organization inter-communication, students' satisfaction and internal marketing. Two models developed that predicts the effectiveness of internal marketing due to changes in employee satisfaction and customer satisfaction.

We found that there is no relation between teachers' experience, their status and their attitudes toward active learning. All teachers desire to improve their students' achievements and are ready to adopt innovative teaching methods that promise to achieve this goal. This is so important. During the marketing stage of the innovative teaching method, there is no need to make segmentation within the teachers. We also found that the teachers can play the main role in active learning, that is mean they can be instructors and not just a knowledge transfer. This fact can support our suggestion to not to perform segmentation within teachers.

The main barrier for adopting active learning is the class size. Dividing the whole class to small groups, may help overcoming this barrier. Class size parameter is one of the three major parameters that can predict the tendency of the institute to adopt active learning. The institute have to put deal with this barrier as a main goal in its strategy.

Adopting active learning can serve the institute goals. The findings point out that all parameters of active learning can be achieved:

- Improving the students' involvement in the class.
- Improving the understanding of materials.
- Improving development of knowledge.

When considering a new strategy for adopting active learning, the institute profile (internal and external) should be analyzed and considered.

Considering teachers as internal customers can accelerate adopting active learning and achieving the institute goals. An internal marketing strategy can improve elements such as: teachers' satisfaction, teachers' motivation' inter-communication, and customer satisfaction. All these parameter can influence the institute goals. Teachers' satisfaction is the most important parameter that should be considered.

FUTURE DIRECTIONS

The current research can be a good platform for future studies. First of all, it can be continued and replicated in more colleges to improve the sample size. Some parameters can be investigated again, such as the relation between teachers' status, their experience and their tendency to adopt active learning.

The research could be conducted again in the same colleges after 2, 4, 6 and 8 years. This could provide a good measure of the rate of adoption.

One of the insights noticed after the focus group is the fact that some teachers are using active learning methods without being aware of doing so. An investigation into the degree of this type of adoption could be carried out.

The current research did not measure the students' satisfaction with the process of adopting active learning methods. The current research asks teachers for their opinion on improving students' satisfaction. New research could include the students and explore their satisfaction after implementing the new internal marketing strategy and determining the influence of internal marketing on external marketing.