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DISSERTATION THESIS

INNOVATION MANAGEMENT IN SCHOOLS

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PREFACE

I would like to endlessly thank Prof. Dr. Musa GÜRSEL, and Prof. Dr. Mehmet TAKKAÇ who did not refrain to support in research, and Associate Prof. Dr. Tuncer BÜLBÜL for helping in the use of director measurements in the survey section and my dear family who has never refrained from supporting me and friends for their support and never leaving me alone.

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ABSTRACT

The purpose of this research is to determine the apprehension of the managers on the competence beliefs regarding innovation management. The scale used in this study aimed to determine competence beliefs of the managers regarding innovation management has been applied to 150 elementary, middle and high school officials selected by a random method from the Selçuk, Meram and Karatay, central districts of Konya. Data obtained have been subjected to SPSS process and the following results have been obtained.

As for the results of the research, competence beliefs of the managers regarding innovation management doesn't show significant difference according to their genders, education levels and job titles. There is no significant difference in subsets of the innovative management competence beliefs according to the managers' professional seniority. There is a meaningful difference according to the innovation strategy managers' age-size. There is a significant difference according to managers seniority in the schools in input management. Managers' competency beliefs regarding innovation management doesn't show significant difference according to number of the students. There is a significant difference in sub dimension of innovation strategies accoding to the number of the teachers in managers' schools. In general, the results indicate that there is a negative and low level relation between teachers' and managers' competency beliefs regarding innovation management.

Key Words: innovation, innovation management, training

ÖZET

Bu araştırmanın amacı yöneticilerin yenilik yönetimine ilişkin yeterlilik inançları ile ilgili görüşlerini tespit etmektir. Yöneticilerin yenilik yönetimine ilişkin yeterlik inançlarını belirlemeyi amaçlayan bu araştırmada kullanılan ölçek Konya merkez Selçuklu, Meram ve Karatay ilçelerinde resmi ilk orta ve liselerde tesadüfi yöntemle seçilmiş 150 yöneticiye uygulanmış ve elde edilen veriler SPSS işlemine tabi tutulmuş ve aşağıdaki sonuçlar elde edilmiştir.

Araştırma sonucunda yöneticilerin yenilik yönetimine ilişkin yeterlik inançları cinsiyete göre anlamlı bir farklılık göstermemektedir. Yöneticilerin yenilik yönetimine ilişkin yeterlik inançları eğitim durumuna göre anlamlı bir farklılık göstermemektedir. Yöneticilerin yenilik yönetimine ilişkin yeterlik inançları görev unvanına göre anlamlı bir farklılık göstermemektedir. Yöneticilerin mesleki kıdemlerine göre yenilikçi yönetim yeterlik inançları alt boyutlarında anlamlı bir farklılık yoktur. Yöneticilerin yaşlarına göre yenilik stratejisi boyutunda anlamlı bir farklılık vardır. Yöneticilerin okuldaki kıdemlerine göre girdi yönetimi boyutunda anlamlı bir farklılık vardır. Yöneticilerin yenilik yönetimine ilişkin yeterlik inançları okullarındaki öğrenci sayılarına göre anlamlı bir farklılık göstermemektedir. Yöneticilerin okullarındaki öğretmen sayısına göre yenilik stratejisi alt boyutunda anlamlı bir farklılık vardır. Genel olarak öğretmenlerin ve yöneticilerin yenilik yönetimine ilişkin yeterlik inançları arasında negatif ve düşük düzeyde bir ilişkinin olduğu sonucuna ulaşılmıştır. Analiz sonuçlarına göre bağımlı değişkendeki varyansın onda birinin açıklanabildiği sonucuna ulaşılmıştır. Demografik değişkenlerin bağımlı değişkendeki varyansın yaklaşık onda yedisini açıklayabildiğini sonucuna ulaşılmıştır.

Anahtar Kelimeler: Yenilik, Yenilik Yönetimi, Eğitim

CONTENTS

LIST OF TABLES

INTRODUCTION

The purpose, importance, limitations and premises of this research have been explained in this section, and concepts used in this research have been defined.

Problem

Today, everything is changing, nothing stays the same. The only thing that has not changed is change itself with a widespread and popular phrase. In a changing world, every living creature has to constantly change and develop the ability of attaining new skills and attitudes in order to maintain their lives. People of our age live in a constantly changing world. Technology concept is going to become one of the most important decisive concepts in the current century. In this context, the growing interest around innovation is another important element in our daily lives. In each area and in everything the idea of "innovation" brings important changes.

It can be stated that innovation is one of the most important issues on the agenda of the enterprises to maintain and improve their competitiveness. One of the root causes uderlying it is the process of change modern economies are experiencing. It can also be stated that change is one of the most basic features of organizational life. The development of new products and services, the presence of the new input sources, improvement of new work processess and materializing of some new developments associated with organizational structure are leading the issues which enterprises have to face under intense competition conditions. (Demirci, 2012:3).

Innovation is needed for the continuous success of all enterprises. The innovations made now guarantee the future of the enterprise. In order for enterprises to be successful in a complex, uncertain and ever-changing environment, primarily innovation is needed. Innovations made today

guarantee the future of the enterprise. Innovation for the success of today's and the future of the business is extremely important. Applying the new technologies and making innovations is mandatory for enterprises to be successful in the complex global competition world today. (Taşkın, 2014: 7).

Almost all sectors make researches and work for innovation management in terms of innovation in recent years. The need of innovation is obvious in the education system as with all sectors. Especially the effects of globalization in the 21st century constitute a lot of pressure on training systems. On the other hand, demands and expections of the parents for better education is increasing on the public and private educational institutions. Considering all effects, the subject appears to be a problem.

The Purpose of the Research

The purpose of the survey of managers and innovation management in relation to qualification is to ascertain their views about their beliefs. In order to achieve this, general questions are as follows:

1. Does the managers' opinions related to competence beliefs regarding innovation management differ significantly according to demographic variables?

1.1. Gender,

1.2. Education level,

1.3. Job title,

1.3. Professional superiority,

1.4. Age,

1.5. Superiority in the school served,

1.6. The number of the students in the school served,and

1.6. The number of the teachers in the school served?

2. Is there any significant relation between managers' competence beliefs regarding innovation management and sub dimensions (*input management, innovation strategies, organizational culture and structure, project management*) ?

3. Do the demographic variables (*gender, education level, job title, superiority, age*) affect significantly and positively managers' competence beliefs regarding innovation management?

The Importance of the Research

It can be stated that innovation, within the perception of community, tend to be seen as a technological innovation. Innovation has a common and accepted nature in the environment of product, process, service, organization, infrastructure and it is accepted that innovation can be made in everything and everywhere and this concept is a reality throughout the development of civilization. There can appear communal structures changing and evolving with the effects of innovative approach in every stage, aspect and level and they gain continuity. Absolute innovation is indipensible in daily life, cultural activities, almost every dimension including communal customs, values and dynamism. (Baykara, 2014: 136).

Innovation is an activity with continuity. Therefore, ideas are put forward about business development and ultimately to save the company marketed in such a way that the competitiveness of these ideas, and the results will be disseminated to evaluation and new returns over and over. In this way, arising new ideas give birth new innovations. An organisational

innovation is a new implementation of organizational method in the firms' commercial applications, business structure and external affairs. Education institutions must be open to innovations as businesses do. Because, continuity of education bounds up with following up developments. Education quality of the education institutions which don't go forward and don't innovate will be lower. Innovation which is such an important issue should be managed well. Especially innovation management carries vital importance in terms of the education institutions.

Constraints

This research has been confined in determination of principals' lines of vision to innovation management and their effects on education in Karatay, Meram and Selçuklu districts in Konya province. Research aimed at determining the principles' perspectives on the innovation management and implementation of innovation management. With this research, it will be possible to determine principals' perspectives on the difference between current management comprehension and innovation management.

Premises

1. Root groups chosen for the research, in the defined and known limits, can represent their system from which they were chosen.
2. The data collected through the measuring tool is sufficiently valid and reliable.
3. Information gathering tool, implemented earlier due to be positive results include an adequate criterion.

Definitions

Education: In this research, education will be defined as the studies offered to students in the school.

Education management: It is a special branch of public management. School management is the implementation of education management to a more limited area.

Innovation: It is to make the product itself and/or production process, marketing process etc. more quality and/or chepaer or ready for technology transfer by developing a technology. (Müftüoğlu and Durukan, 2004: 155).

SECTION 1

RESEARCHES RELATED TO THE SUBJECT

In this section, relevant researches at home and abroad have been analysed.

1.1. Researches Conducted in Turkey

Göl and Bülbül (2012) have made a research aiming at developing a valid and reliable measurement tool which can be used in order to determine the school managers' competence beliefs regarding innovation management. The validity and reliability of the scale of Innovation Management in schools as a result of the findings of the scale, school managers' innovation management can be used in determining the proficiency of their beliefs in a structure. By using the scale, studies can be executed which determine the organizational competency of school managers who play a key role in the effectiveness and efficiency of innovation process. The Scale also can be used to evaluate the school managers' competency in innovation management as regards teachers' and education evaluators' perceptions.

As a result of the research made by Gül and Bülbül (2012) aiming to determine elementary school teachers' perceptions regarding competency of innovation management, teachers' and managers' perception corresponds the level of 'I agree most' in 'innovation management competency' and its sub dimensions.

Teachers' perceptions of the competence of managers to innovation management differs accoding to age groups; teachers aged between 25 and 35 see themselves more competent in innovation management. When professional seniority is taken into consideration, teachers who have 21-30 years professional seniority see their managers more competent in all dimensions and percieve them as leaders who have the competency to

manage the innovation. According to variable of gender and branch, there is no significant difference between perceptions of teachers.

Kurtuluş (2012) in his research aimed to determine what teachers and students who account for the basis of forming qualified manpower know about concept of innovation, determine what has been done in education in the name of innovation and bring some sharing channels into open. By way of conducting interview technique in the scope of research, a qualitative survey has been done by interviewing with students and teachers. The study reveals that teachers and students have not been aware of the concept of innovation and its importance; it has been determined that stimulation should be provided in order to bring innovation opportunities and facilities into action.

1.2. Researches Conducted Worldwide

Riley (2015) learning technologies, which shows that we need to be innovative in basic and reconsider our cultural customs related to education itself, has supplied significant development for understanding the potential of important development for intuitive possibilities of educational innovation necessary to speed up implementation of learning technologies.

Russell and Schneiderheinze (2005) have conducted a research aiming to reveal how four teachers living in difffrent cities in the state of Missouri implemented a learning environment (CBLE) that is creativity-based and based on an online technology with a unit design that has an infrastructure innovation series. As a result of the research, educational studies based on finding out the complex human systems, innovation studies, productive professional development studies and learning and improvement studies can help potentially to materialize implementing innovative tools in order to provide reforms to teachers in classes and in preparing professional development programs for educational innovators.

SECTION 2

INNOVATION CONCEPT and INNOVATION TYPES

In this section, definition of innovation concept, source of innovation, types of innovation and importance of innovation are going to be handled.

2.1. Concept of Innovation

According to the theory of Economics, creating value by enterprises are carried out in three different ways. These are; to create a position advantage and maintain it, to create highly qualified resources and develop them and to consult to innovation. In this case, innovation can be described as a new combination of sources which meeting the unmet market needs and creating more value than the cost of needed sources used (Ateş, 2008: 16-17). Innovation concept has been defined in very different ways in literature.

In recent years, numerous studies done on the subject of innovation show an increase in the importance of innovation. To be able to cope with growing competition, countries and enterprises promote innovation. However, in the studies innovation is either not defined or defined deficiently. When defined, the meaning of innovation is changed to fit the subject studied. For instance, economists generally define innovation as first economical implementation of an invention. (Tekin et.al, 2003: 139).

There are many different definitions of innovation made by different authors. Therefore it is not a homogeneous term, and each author provides a new definition by highlighting elements associated with the new definition. For instance, in a study made on 76 different definitions (Güleş and Bülbül, 2004: 124);

i. most researchers had failed to make a clear definition of the term,

ii. many of the definitions used can be detached by category and,

iii. definitions can vary in the direction of the highlighted as the result of a long period. At this point, in general, with the description of the term, innovation has been expressed including concepts such as a new piece of development process with (a), the new part's development with (b), and the new part's usage with (c).

Innovation was derived from the Latin origin of the word 'innovatus' and with its origin, it means 'intruduction of new methods of social, cultural and administrative environment' (Elçi, 2014: 4). The Webster dictionary describes it as "new and differen result" (Tekin vd, 2003: 138). It meets the equivelant words of 'innovation' and 'refreshement' in Turkish. Innovation, as a performance dimension, generally can be used in two meanings. First, a search and development group's and an individual's conducting scientific discoveries which meet the needs of the age; and the second, implementation of a new technology, or usage of an existing technology in order to conclude economic results under the new constraints conditions. (Gülcü, et.al. 2004: 71).

-Drucker describes the innovation as "mission of providing the capacity of creating the new and more values to the people and material sources. (Drucker, 2010: 14).

-Vassal describes the innovation as 'going into some activities, making some changes in the existing conditions.' (Eren, 1982: 16).

-Higgins describes the innovation as 'forming organizational processes which have important effect for an individual, a group, organization, industry and society or developing existing services and products or the process of creating new services and products.' (Güleş and Bülbül, 2004: 124-125).

-Sink expresses innovation as ‘a creative process including changes which are done in order to respond successfully to all kinds of compulsions caused by internal and external surroundings, with regard to wishes and facilities, technology, products, services, procedures and policies.’

Innovation is a process of making all new idea, behaviour or a thing with the reorganization of a new or existing freight, production method, provision source, industrial structure, marketing and making similar tools an economic element, development and usage which are different from existing forms in quality. (Baykara, 2014: 17). It is possible to describe innovation as an idea, implementation and object newly made accepted by an individual, or another applying unit. According to this concept, individuals and applying units can be individual consumers or organizations in which innovation can be transferred in a social system. Individual units make the information exchange about the innovation and each individual decides about accepting the innovation in a specific time. (Tekin, vd, 2003: 139). Innovation is related to many different concepts nowadays. These concepts have been tackled below in detail.

2.2. Concepts Related to Innovation

Concepts generally related to innovation are invention, creativity, research and development, entrepreneurship and change.

2.2.1. Invention

Invention is a process of finding a new basic principle; creation a new material, process, element, service and freight’s and their presentation. (Baykara, 2014: 17). A new invention can be considered as a novelty for everyone and sometimes a thing which is new to someone can be an ordinary thing that is currently used. For instance; a product which is new to a market can be an ordinary product which has been used for a time in another

market. Similarly, a market which is new for a company can be a market which has already been entered and already left for another company. A technology which is new for a company can be already used by another company. For this reason, innovations, may not have the same importance and the degree of innovation always and everywhere. (Uzkurt, 2012: 18).

People can take advantage from inventions for innovations. However, the important thing in innovation is to do something that has not been done yet, or is to differentiate what is being done. Innovation is not to invent the unexplored thing; It aims to explore ways of creating value. For this reason, ideas and concepts gains importance. Innovation, requires commercial success. On the other hand, making an invention does not guarantee the commercial success of the invention. As long as a product which doesn't have the commercial value emerges, it will not create a value. (Adıgüzel, 2012: 8).

The concept of innovation shelters a new product, a new service, a new process or a new organizational structure in its constitution. The concept of innovation is often used as a synonym for the concept of invention because of the usage of the word 'new' in the announcement of the concept. Both also carry the originality of the concept supports this trend. However, these two concepts cannot be evaluated in the same sense. On the other hand, aforementioned new product/service or process in the innovation wraps itself in a commercial identity. (Demirci, 2012: 9).

Creativity

Creativity is new, beneficial, different ideas and thoughts which are the source of economic innovations and of scientific discoveries. Creativity is defined as a process that enables the formation of innovation at the same time and at the end of this process it is defined as the quality of the product

that occurs. In this sense, creativity is to expose an artifact or product. (Adıgüzel, 2012: 9).

Some management thinkers defend the need for making a distinction between creativity and innovation. These thinkers define creativity as production of a new idea or thought, and define the innovation as conversion of this produced idea into a new product, service or method of production. According to Lawrence B. Mohr, creativity is 'implementing or creating a new thing'; innovation is 'putting this thing created new into practice'. (Şimşek and Çelik, 2010: 155-156).

There is a significant difference between the creativity and innovation. Creativity is related to creating ideas, or rather creating some new ideas out of existing ones. Innovation is utilization of an idea which has been created in order to solve a problem. (Eren, 1982: 17). The distinction between creativity and innovation is an important function of organizational life. There is a difference between the capabilities needed in order to create new ideas and the capabilities needed in order to transfer the implementation of these ideas with commercial purposes. In order to take full advantage of an organization, both creative and innovative businesses are interested in seeing corporations (Şimşek and Çelik, 2010: 156).

2.2.3. Research and Development

Research is a scientific-technological activity to know and learn the unknown activities for learning. Development is an activity to direct the current information or technology further with reorganization. According to this concept, research and development is systematic and creative studies include society, culture and human information. (Baykara, 2014: 16-17).

Implementation and development of new technologies in order to meet consumers' demands and needs is a task accepted by research and

development which is related to technology. Technological information emerges as a result of research and development studies, disperses and is shared throughout the technology and as a result of this economic growth occurs. Distribution of research and development funds among invention (technical research) and innovation (implementation to production and marketing) is important. (Tekin and Ömürbek, 2004: 130).

One of the mistakes made in Turkey and in the World about innovation is to see innovation as only a movement of research and development and to focus only on production and emergence of new things. As a matter of fact, in the years when Europe made more research and development investments in innovation but saw that they were behind the U.S. in feedback of these investments, they realized its importance and the value of trading innovations as well as its realization. (Adıgüzel, 2012: 12). Research and development activities is a part of the process of innovation. If these studies are not supported by innovation, they don't create values and turn into an innovation. (Aksel, 2010: 12).

2.2.4. Entrepreneurship

The concept of entrepreneurship, becuse it creates a sense of social and individual welfare, attracted the attention different groups during a long time and has entered into literature as a research subject. Entrepreneurship, which attracts both academics and the private sector's attention, keeps its attractiveness in recent years. (Onay and Çavuşoğlu, 2010: 48). Entrepreneurs turn capital into investments to produce/market goods or services by taking the risk of loss/profit. The investment activities made for the purpose of producing goods and services are called enterprise and maintaining the mentioned job as a profession is called entrepreneurship. (Tutar and Küçük, 2003: 23).

Entrepreneurship, with the help of a network of institutions and education is the individual, organizational, environmental and process of a new dimension of innovation and enterprises. (Aksel, 2010: 13). One of the bottlenecks that entrepreneurs encounter is related to innovation. Generally, facilities in this subject cannot be utilized. This fixation is valid for especially innovation of product and market. The aforementioned innovations can be rooted innovations in that they can be marginal and even artificial innovations. The important thing is its market value rather than its technical characteristics. Because, the value of the innovation for the enterprise is measured with its market value. (Müftüoğlu and Durukan, 2004: 155).

2.2.5. Alteration

In general terms, the change refers to bringing anything from one level to another. This rather signifies bringing personal knowledge and abilities into another status rather than changing the places of individuals and objects. (Bakan, 2013:254). Alteration demonstrates two levels of characteristics, individual and organizational. The most important characteristics in individual level can be accumulated in the points of developing new methods of executing business, geting themsleves used to conduct diversely and resistence that they show against alteration. The first of these is related to creativity and innovation. Present day organiations have to make restructuring which may put individuals' creativiy into the light. Individual creativity is the main factor in altering oranizations. For this reason, managements of organizatons should come up with different advice which can make their workers creative. (Şimşek and Çelik, 2010: 173).

At the same time, innovation is a process of alteration. However, it is worth noting that each alteration doesn't mean an innovation. Alteration coming with innovation is original, so until that day an alteration never occurred. (Özdaşlı, 2002: 14)

2.3. Innovation Sources

Continuous innovation processes in the creation of enterprises today are the most important strategic decision of enterprise management. The most important element in this strategic decision is how internal or external resources will be used in creating innovation. (Aluftekin, 2012: 102). Innovation resources convey the skills and the abilities which the organization deems necessary to capture the success of innovations and the appropriate environmental conditions. (Biçkes, 2011: 85).

According to research, while only 5% of the enterprices used the external sources in 1990's, today this ratio rose to 85%. This result is a requisition for the enterprises to interact with the other organizations depending on the rise of the uncertainties in the global competitive environment. For this reason, acting of the enterprises by themselves in the innovation process conveys no meaning. In other words, the ability of an enterprise to manage the knowledge obtained from external sources is directly proportional with its capacity of creating innovation. (Aluftekin, 2012: 102).

According to Peter Drucker (2002: 96), there are seven sources of innovation. These can be splitted into two groups as internal and external sources of the innovation. Four of them are internal, namely related to changes in the enterprise or industry. The other three are external, namely related to changes which are external to the enterprise or industry. Internal innovation sources are formed inside the enterprise or sector while external innovation sources are formed outside the enterprise or sector. It is also possible to sort them as follows:

a. Internal Innovation Sources

- Unexpected developments,

- Disharmonies,

- Process requirements,

- Changes in the structure of industry and market.

b. External Innovation Sources:

- Changes in the demographic composition,

- Differentiation in perceptions,

- New knowledge.

2.3.1. Internal Sources

Internal innovation sources consist of some factors of enterprise itself like knowledge, skilss, ability to learn, investments made with entrepreneurial features, research and development studies, experience and degree of adopting new technologies. However, because it is not possible to observe these resources and abilities directly, the innovation capacity of the enterprise can be measured by utilizing outcomes of these factors. (Aluftekin, 2012: 102).

2.3.1.1. Unexpected Developments

Unexpected developments can arise as success or failure. Both situations can create effective sources which are eligible for innovation. While successful developments create innovation areas, failing situations can create opportunity or resource fo future successful innovation. (Kanber, 2010: 25). But, because some managers see themselves as unfailing and infallible, they perceive the unexpected success as challenge against their own decisions. Consequently, innovation opportunities based on unexpected

success can be ignored or rejected because of some reasons originating from managers. In order to overcome this administrative obstacle, some pracitces can be applied such as manager development, personnel reinforcement, participation in the management, openness to critisism and creating an environment of freedom, or etc. (Biçkes, 2010: 87).

Unexpected success is the first and the easiest and the simplest source of innovation. At the beginning of 1930's, IBM created first modern accounting machine in order to be used in banks just before the computers. But, because the banks didn't buy new hardwares, IBM had a hardship because of the machines which it produced. The thing that saved the company's life was an unexpected success. This unexpected development was that the New York public library wanted to buy these machines. Having more money sources than banks enabled IBM to sell more than 200 machines. (Aluftekin, 2012: 102).

2.3.1.2. Disharmony Situation

The difference between expectations and results or facts and assumptions is disharmony. Even though we don't understand and don't take into account most of the time, disharmony can create an opportunity for innovation in the process. For example, even though grass fertilizer producers know how much fertilizer to put in a field per square meter, there was not any tool in order to measure the accurate amount. For this reason, gardeners had to disperse the fertilizers by hand. (Kanber, 2010: 25). Peter Drucker decribed the disharmony as the difference between current conditions and the conditions that should be. There may be disharmony between the strategies of firms in current market and consumers' expectations or economic realitites. These disharmonies can arise because these enterprises do not renovate themlseves. In these kind of situations, innovations were needed to assess these disharmonies. (Aluftekin, 2012: 103).

The founder of Alcon Laboratories, Bill Conner's innovations in medical technologies ensured him to create 1960's most successful story. This is a good example of an innovation created out of disharmony. Even though cataract operation is one of the most applied operations in the world, doctors have been applying connective tissue cutting process which they called as outdated for the last 300 years. Eye surgeons had learned to cut connective tissue perfectly, but they were hesitating to apply it because it was an inharmonious procedure with the rest of the operation. (Adıgüzel, 2012: 17-18).

By finding some solutions to productivity problems which many other airliner cannot find any solution, Southwest Airlines in the 1970s, developed the idea of the uncomfortable but cheaper airline. By doing so, Southwest attained the customer mass which was ignored by many airline companies, and by expanding market share, it could achieve being one of the most profitable airline companies. The critical point laying under this success was Southwest's ability to recognize the disharmony in the way they looked at the customers and their operational ways. Today, many airline companies are competing with big companies by imitating the Southwest's business model and productivity techniques. Ryanair from Europe and Pegasus from Turkey can be given as examples. (Aluftekin, 2012: 103).

2.3.1.3. Process Requirements

When a demand arises, entrepreneurs need to find a way and a process to develop new ideas in order to meet this demand. (Arslantaş, 2001: 22). In a borad term, if a process which is used does not meet the new needs and needs to be amended, it is higly probable to bring innovation. Process requirements, different from other innovations, start with an affair which is done because of the process rather than internal or external event and focus on mission rather than situation. (Iraz, 2005: 95).

Everyone who drives automobile in Japan knows that this country does not have a modern highway system. (Kanber, 2010: 26). Existing roads follow the roads constructed for the caravans or paved by caravans in 10th century. The reason why these roads are still working is the adaptation of reflection system which has been used in the U.S. since 1930's. This reflector warns all the vehicles about the other vehicles which get close to it from each angle. This small discovery which ensures the flow of traffic without any accident met a process requirement. (Adıgüzel, 2012: 18).

Process requirements covering techniques used in order to reduce the costs, increase the quality and produce new and significantly improved end products may be the most understandable ones among the factors which are the sources of innovation. Most of the discoveries like bulb, telephone, airplae, painkiller arose as a result of the efforts to solve some well known problems. The point which is critical and commonly forgotten is the reality that these innovations can be more characteristics or can be simpler. In other words, management techniques which make us do a job more efficiently can be put into the definition of innovation. Bread slicing machine or electric water heater are also very important tools. Moreover, it is easier to market them compared with advanced technology products. (Aluftekin, 2012: 103).

2.3.1.4. Industry and Market Structure Changes

Small changes will occur continously such as changes in consumer behavior in the marketplace, advances in technology, the growth of the market. Entrepreneurs utilize the opportunities that may arise in the best way by following these changes. (Arslantaş, 2001: 22). Dynamic power that promotes innovation opportunities puts pressures constantly on stagnant markets and enterprises. Rapid change or growth periods of the major players of the market and technological changes can reveal great opportunities for innovation. Those who follow these changes closely and see

them as an opportunity can assess several gaps previously unnoticed in the industry or ignored in the frame of innovation. (Durna, 2002: 51-52).

Every industry and market structure may change at any time. With these changes, new fields can be created. However, it is necessary to constantly observe the market sector and exchange analysis. A rapid growing of a sector causes a change in its the structure. Realization of the growth causes the innovators to look out for opportunities. (Önal, 2009: 7). If managers see an innovation as a threat, they tend to overreact and use large amounts of resources too fast. In the situation of seeing the change as an opportunity, they can use lower amounts of resources. In other words, their way of shaping the innovation determines the strategy that they apply. (Aluftekin, 2012: 104).

For example, three young people working as a low-level manager in a large hospital in the mid 1960s in America, decided to set up their own business by realizing the increasing demands in hospital services such as maintenance services, kitchen, laundry and offered aggrements to the firms to provide these services with trained professionals. After 20 years, this firm endorsed one billion dolars. (Kanber, 2010: 26). For many years, great and powerful manufacturers and vendors who have not been threatened and are successful tend to feel arrogant. They don't care about the new entrants to the sector and they see them as amateurs. But, when new entrants take possession of the bigger part of the market, they see that their abilities are getting less. They have already been deprived of the flexilibity to encounter because of their strict organizational structure which is caused by their size. (Durna, 2002: 52).

2.3.2. External Sources

External innovation sources can improve in social and intellectual environments which stay out of enterprises. The reasons which cause these

factors to come out are changes in demography, perception changes and new information sources. (Aluftekin, 2012: 104).

2.3.2.1. Changes in Demographic Structure

Demographic changes in general are income, employment, age, status, etc. Demographic variables in terms of innovation opportunities provide important opportunities for companies to minimize the obscurity and uncertainty (Önal, 2009: 8). Demography as a discipline taking its roots from economics and statistics showed itself in sociology and biology. Basically, it carries an interdisciplinary feature and constitutes a source of data and information in many disciplines. Changes in the structure of the population is creating innovation opportunities. However, it is necessary to read right the changes in populations structure in order to capture these opportunities. The enterprises that can interpret these changes may become tomorrows' businesses (Durna, 2002: 56). The most reliable of outsourcing deals are changes in the demographic structure of innovation. (Drucker, 2002: 8).

Administrators, despite being aware of the demographic issues in a long term, have concluded that the demographics changes slowly. However, in our century demographic structure exhibits a rapid change. Real changes occur in population and in the total population and the age, education, occupation and in the geographical distribution and opportunities (Biçkes, 2010: 92). In the 1970s, in developed countries, everyone knew thahat there was a significant decrease in the birth rate, and a training explosion occurred; more than half of the young people were also continuing their education after finishing high school. As a result, the manufacturing sector would decrease the number of traditional blue-collar workers. (Drucker, 2002: 8).

2.3.2.2. Changes in Perception

People’s interpretation of events and concepts provides an opportunity to create changes in different ways. Changes in perception leads to the emergence of new ideas (Arslantaş, 2001: 22). Changes in people's perceptions can create the opportunity for innovation as consumer behavior. Various promotional activities, the views of opinion leaders and environmental changes affect the change of perception. This does not happen only in consumer aspect, but also entrepreneurs are experienced perceptions change. Entrepreneurs have a series of features such as they can approach differently towards events and issues, can create diverse perspectives, can make perception changes as consumers do (Ürper, 2004: 46).

Perception is the shaping of every information gained by five senses in our brains and is gaining appearance of these. Perception is not saving the situations as a real condition an is interpretation and recording of them. For example, if we consider it as a picture of our environment, this official interpretation is different for everyone. For example, if we consider it as a picture of our environment, this official interpretation is different for everyone. This difference creates, it is our impression that determines the perception of the same events and individuals can acquire different impression. Therefore, perception does not change the facts change, modify their meaning. "The glass is half full" and "The glass is half empty" words to describe the same phenomenon, but in very different means. That cup perception of the company at this point can make them a great opportunity for innovation (Aluftekin, 2012: 105). For example, today in music, sports and television can influence the lifestyle change in people's perceptions. In this case, the enterprise has become inevitable to benefit from this trend. Innovators or entrepreneurs who noticed the change this perception accordingly if there is created the widest selection of goods and services to consumers a source for innovation. For example, today's increased awareness of health, birth

control, increased public concern over environmental issues has led to innovations in many products and services (Durna, 2002: 56-58).

2.3.2.3. New Information

Knowledge-based innovation, time spent, accidents are different from other innovation and entrepreneurship in the way they have created for predictability in terms of capacity challenges. Knowledge-based innovation, the collection of information in many areas, are born being associated with each other. Therefore, the rise time is long. After rising, it takes too long to make them commercial. Besides it is not necessarily accurate that information on each defendant would be marketable innovation. Therefore, it carries market risk. Such intense source of innovation creates excitement and expectations. Sometimes, the result is not as desired (Ürper, 2004: 46).

Among the innovations which change history, those based on new information comes ahead. Innovations based on information are different from other innovations with regard to time they cost, accident rates they cause and their predictibilities, also challenges they create for entrepreneurs and these are the ones with the longest development time (Kanber, 2010: 27). Ensuring that consumers adapt to innovations depend on information and effective thinking. Suitability occures by understanding consumers' needs, past experiences and values generating consumers. (Saakjarvi, 2003: 90).

Another feature of the innovation based on knowledge is that it requires information from many types, not a single species in order for it to be effective. For instance, computer required at least six infomation types including binary arithmetic system, Charles Babbage's calculator thought in the first half of the 19th century, punch cards for the census found by Herman Hollerith in 1890 in the US, the audio tube which is an electronic switch found in 1906, ymbolic logic developed by Bertrand Russell and Alfred North

Whitehead between 1910 and 1913's, pragramming and feedback understanding emerged during the First World War as a result of the unsuccessful move to develop effective anti-aircraft guns. But even though all the necessary information was at hand in 1918, it was not possible to materialize a working first digital computer before 1946. (Durucker, 2002: 9). Despite this long history, innovation based on new information comes ahead: either it is scientific, or technical, or in the social sphere. "Entrepreneurial Banking" which is one of the most powerful knowledge-based innovation in the modern banking, namely the use of economic development in order to create capital theory was formulated by the Comte de Saint-Simon during Napoleon era. Despite Saint-Simon's extraordinary great fame, it was only after 30 years from his death in 1825 that his followers Jacob and Isaac Pereira brothers' first entrepreneurial bank, Credit Mobilier established what we call finance capitalism today (Aluftekin, 2012: 105).

Knowledge-based innovation is certainly not dependent on a single factor. It depends on the combination of several different types of information. Innovation materializes by combining scientific, organizational or market related different types of information and converging them together. Today, innovation rather than individual talent, is emerging as a result of work with experts in the field (Durna, 2002: 61-62). Things that people do not like and make their lives harder, contradictions in the market, needs undisclosed and hidden in people can be sources of innovation. It should be remembered that not only the needs of the people revealed, but also hidden needs trigger innovation (Ürper, 2004: 47).

2.4. Innovation Types

It is possible to classify innovation in different ways. Innvation, can be classified according to its frequency, degree of innovation in terms of costumer or enterprise, or depending on the effect or value of the enterprise or customer's benefits. (Güleş and Bülbül, 2004: 129). Innovations occur

through a series of processes and have different levels of effects on the different areas and groups. In this context, new structural features to effect degrees are subjected to classification by considering many different criteria. This classification generally; the characteristics of innovation, challenge and change brought about by differences in degree are the classification according to the density and technology areas (Uzkurt, 2012: 17).

Schumpeter (1934) divided innovations into five different types under two main categories as product and process innovations; new products, new production methods, new sources of supply, the use of new market and and new ways of enterprise organization. (Sanrı, 2011: 12). Sternberg divided innovation into 8 categories such as repeating, redefining, prudential increasing, prudential increasing in high level, redirection, restructuring, restarting and integration. (Sternberg vd, 2003: 159). Innovation is examined separately based on content types below.

2.4.1. Product Innovation

Product innovation refers to innovation usually associated with customer requirements. Product innovation can be defined as a technology or a combination of new technologies which are used to convert a new idea into a decoy or developed prodcut method or service, introduction of a new product to the market or used for production. Nevertheless, a small portion of the decoy product are included in the new truly world class product. Most of the businesses are trying to do small changes in the product (stage product innovation). (Akgemci and Güleç, 2010: 139).

Products are evaluated by users in accordance with the qualities in their nature. For instance, detergent consists of different components such as cleaning power, smell, washing temperature. Several brands compete with each other in the market with products of different components. Enterprises' innovation by combining different features known in combination with a

detergent composition previously or adding new features to the product has been expressed as product innovation. (Güleş and Bülbül, 2004: 135).

Though new product development process requires different stages depending on the type, field and size of innovation, generally it can be said that every innovation process has particular common stages. Traditional new product development processes take place as a result of a number of stages starting with research and development.

2.4.2. Process Innovation

The process of innovation, the company's Full Time Production (FTP) manufacturing capabilities in a radical or a machine can be as simple as switching to applications such as making improvements. But Davenport defined process innovation as visible and stunning developments, with a radical view, it is described as improvement radically of main enterprise processes by enterprices' adoption, and by using new instruments and job desings. Therefore, the process of implementing prcocess innovation in the level of radical innovation can be assessed as innovation engineering or re-design of work processes. (Akgemci and Güleç, 2010: 141).

Cost-cutting innovations made in the production process, order picking and distribution efforts in promoting the event and reengineering (redesign of the process) exert efforts to reduce the costs of products and services. (Önal, 2009: 26).

Process innovation involves new or significantly in the implementation of an improved production or delivery method. Process innovation expresses the developed or new way of producing or presenting a product. Process innovations can be forseen as reducing unit production or delivery costs, increasing the quality or production or delivery of new or signifcantly improved products. (Kurtuluş, 2012: 7). It can be possible to describe new or

existing processes or improving the distribution management and made more sophisticated as a different and product. (Toprak, 2013: 5).

Hammer and Champy describe the process concept as the sum of actions in which one or severeal types inputs are taken and outputs created in order to create values for customers. In a different description, process are defined as actions or group of actions which inputs are taken and by adding values and created for the customers. In this context, the process of innovation is generally taken as the value of the entry relating to the renewal of the participating client that presents a set of actions or activities appeared. (Akgemci and Güleç, 2010: 139).

Process innovation includes the changes in the production and distribution processes. If more products and services are produced in the same quality by using the same amount and with the same quality of production factors in an enterprise, it can be mentioned as a process innovation. To produce a good or service with better quality and more effectively is a source of advantages. (Tunç, 2008: 17). Process innovation is also defined as tools, device or knowlegde which are new for an industry, organization or department and which are the technologies used to convert inputs into outputs. Therefore, process innovation can be accomplished by improving the quality or reducing the delivery cost to produce new or significantly improved product or to deliver. (Akgemci and Güleç, 2010: 141).

2.4.3. Marketing Innovation

Marketing innovation is defined as different, various and new designs, the use of packaging and marketing methods in the product design or packaging, repositioning for the product or on the pricing promotions or developed improving the existing ones to be further developed in order to increase the company's sales, to meet the customer needs better and a way to move customers to new markets or new position.

Marketing innovation is to increase the company's competitiveness by developing new designs and marketing methods and/or adapted by using them (Kurtuluş, 2012: 7). A marketing innovation is a new marketing method which includes product design or packaging products positioning, product promotion or significant changes in pricing. Marketing innovations aims to increase the company's sales, to respond to the needs of customers more successfully, opening new markets or new products of an enterprice. (Oslo Kılavuzu, 2005: 59).

Shergill and Nargundkar (2005) put forward that the ultimate goal of marketing innovation the increase in sales, besides more successfully to meet the needs of customers and finding new markets and product positioning in the market in a new way in order to carry on (Sanrı, 2011: 15). Innovation, not a single phase commit activity, on the contrary, it is continuous activity affecting internal and external factors which the organization has opportunities to increase its market share. Therefore, firms establishing and managing a system that encourages innovation have the chance to develop products and services in superior characteristics, to produce and market more (Toprak, 2013: 6).

2.4.4. Organizational Innovation

Innovation, because it constitutes the basis of entrepreneurship, puts forth the organizations' innovative degrees, and to what extent they are entrepreneurs. Strategy, structure and innovative applications determine an organization's innovations. In other words, while there are strategies, structure and policies which impede innovaitons in non-innovative organizations, there are strategies, structure and policies which support innovaitons in innovative organizations (Naktiyok, 2004: 177). Innovative organizations attempt to control the environment and forecasting environmental change and commitment. As a result of their relationship with the environment and the structure in time they will create conditions to bring

about the necessary changes in favor of increasingly environment. These organizations make adjustments and changes to act in accordance with environmental requirements and create innovation methods and processes in the quality of manpower. (Eren, 1982: 86).

An organizational innovation is the implementation of a new organizational method in the company's commercial practices and workplace organization or external relations. It can be forseen that organizational innovatins decrease the administrative costs, improve workplace satisfaction (hence labor productivity), access the non-commercial assets and increase the company’s performance by decreasing the equipment costs. (Oslo Kılavuzu, 2005: 55).

Organizational innovation involves new or significantly improved information management system, significant changes in the business organizations, development of new methods in relation to the company's other business by ways of merges of companies and outsourcing or a significant changes in current ones. In other words, institutional innovation exhibits differences in the operation, workplace regulations and relations of organizations (Kaplan, 2010: 16).

Organizational innovation is innovation in the structure and functioning of the organization. Then, the degree of innovation changes. A product, a process and an organization and functioning in a new world, new country can be new in firm. If it’s new new in the country, it has already been created in a differen counrty or countries. A company either produces innovation itself or buys it. Innovation purchased starts the company behind in the race. Most of the time, this race will not be won. Because, competitor has the same innovation. In this case, superiority is earned by a difference, difference is provided by innovation. It is essential to do the thing that nobody has done in entrepreneurship, not to do the things that everobody has done. (Ürper, 2004: 53).

2.5. Significance of Innovation

As a matter of fact, innovation is certainly not done for the difference. Yes, innovation can bring difference at the end but the aim of the innovation is not the difference. The goal of every business is to bring a solution to the problem of customers only, their needs, and this service is to make money from them mutually. (Özkent, 2015: 19). Businesses that expect from one of the most important goals of innovation in the future will make possible the survival of the business through competitive advantage. Many businesses have realized substantial savings thanks to obtained innovation (Akgemci and Güleç, 2010: 147).

Today, the specifier of competitive advantage is not only costs. Such factors as responding to the needs of the market rate, quality of products and services in the product life cycle translate initialisms, design, development of new products and services, offering a full range of products and services according to the customer request production, new management and organizational models get involved in the business. Therefore, all these factors which are more important than the cost are also required to do innovation. Because the road passes through the existing market share to get into the market and increase the competitiveness. (Toprak, 2013: 8). In fact, the main objective of innovation is completely parallel with the purposes of the company. The purpose of innovation is to create new value for our customers and as a result this value of appreciated customers profit. This can be in the form of money, profit, customer loyalty to provide or strengthen brand awareness (Özkent, 2015: 19).

Both product and process innovations change from the past to the present in competitive environment on the main determinants of competitiveness and changing. This implements the innovations and businesses; creating a competitive advantage in the market, dividends and income streams on the property and in front of the industry in enhancing

competition in the best innovation is the only way to make the leap, hence the most powerful if done right, innovation is a competitive weapon. Innovations provide important abilities to the enterprises they can be used in an intensive competition environment. (Güleş and Bülbül, 2004: 151).

Innovation is an important application in order to provide employment, sustainable growth and social prosperity in a country. That is why, innovation residing in the business sector is seen as an important tool to provide competitive advantage. Innovation activities are needed between countries, as well as business-to-business competition to produce a product according to customer requests and delivery of this production and presentation in addition to performing an economic way of producing the new product to the market. In order to achieve competitive advantage for businesses today, they should be capable of creating and finding themselves in a completely different way, redefining, the creation of new basic strategies. It is located in sector again discover that their competitors could be the difference in the products and services. (Akgemci and Güleç, 2010: 148).

SECTION 3

INNOVATION MANAGEMENT IN SCHOOLS

In this section, the importance and definition of management innovation and the definition of innovation management that specifies the elements and what's new in education management are discussed.

3.1. Definiton and Importance of Management

It can be said that management is as old as human history considering the fact that the first men got togehter to fate and join forces in an attempt to make fight against the tyrants, the wild animals and natural forces. In every time and place, it occurs that human groups, in order to accomplish common aims, first come together and then make division of labor among themselves in the forms of manager-managed or leader-followers (Şimşek vd, 2008: 7).

In short, management is described as the study of a superior in hierarchy. (Gürsel, 2013: 59). Management concept has been used in a variety of ways and the people in literature, such as political term in the language. It is possible to group these definitions and administrative "activity/function", "administrative system", "organization", and "administrative staff". (Eryılmaz, 2011: 2).

Management is the arrangement of the work on track to reach the goal of the an organization. In this case, the presence of management and the presence of one or more objective can be mentioned. (Ertürk, 2013: 10). Management is a universal process as old as art, social life, and it is considered as an evolving science. Considering that the three dimensions, management refers to some actions and functions as a process, an implementation as an art, sistematic and scientific knowledge society as a science. (Dündar, 2007: 43).

The question of what defines management has been given in various books: These definitions vary according to how they approach the branches of science. According to variety of scientific fields, the meaning management's can be explained as follows; (Efil, 2010: 6):

According to economists, management is one of the factors of nature, manpower and productıon with capital. Here the continuation of life is required in terms of production. Therefore, management is considered successful as long as it increases productivity and more earnings.

Management scientists express that management is an authority system. According to this, it consists of two groups as managers and managed ones. The relation between these two groups is an authority relation.

Management is considered to be a class and reputation system according to sociologists. The success of science and education as a result is the basis in order to enter this class in our age.

Other disciplines such as psychology, social-psychology, law describe management in accordance with their interests.

Considering these descriptions, as the most generic description, management is the effectiveness to administer the other. To give orders to others and expect obedience from them is a management authority. It can be possible to direct people's labor to a common aim by way of having management authority (Tutar and Erdönmez, 2008: 6). Management is the sum of the cooperation and coordination of efforts to provide a group of people, orientation toward the designated purposes, the division of labour between them. Management is the sum of efficiently and effectively making decisions and enforcement process including financial resources, especially

people, equipment, fixtures, raw materials, materials and time compatible with each other. (Eren, 2003:3).

Management of the concept, sometimes referred to public organization, sometimes works, sometimes operating and administrative section of the administrative staff and, in some cases. In fact, management is a concept that contains all of these. (Eryılmaz, 2011: 2). There is no specific goal to reach in management only through the efforts of people. All the resources to perform specific management objectives in a correct manner have to be available to people. To manage people is to use the right tools and supplies. (Paşaoğlu, 2013: 3).

3.2. Definition of Innovation Management

Innovation system is a process of crowning individuals with information and experience, your abilities for a particular purpose-oriented activities and outputs that are converted to the projects. Innovation can be regarded as the output of a systematic work of administration that is required. As it was stated before, innovation is a process. If enterprises have a reserach and development process to manage their research and development, if they have order-delivery processes to manage production process, they will have innovation process to manage innovation activities. (Demirci, 2012: 10).

A firm must have an innovation management system which deals with the company's resources and strategies and consider the requirements of customers, determine the purposes for different aspects of the innovation process and manage, control and develop the innovation process in addition to technological opportunities and company’s sources. (Sanrı, 2011: 19).

A company which has innovation understanding and cares the technological developments with this notion, makes innovations in product, service and marketing, attaches importance to process and organization

innovations, forms their infrastructure and institutional framework according to innovation will reach their goal more quickly. (Taşkın, 2014: 7).

Innovation management requires relevant objectives, plans, the implementation of this plan and the success of innovation system and depends on the implementation of these systematically. Innovation management includes wide ranging services in the process, product design, starting from the final user to reach (Tekin and Durna, 2012: 94).

Innovation management studies also show that the process of innovation is one of the basic processes for enterprises of vital importance. It is not expected that innovation comes out in the enterprise itself. The enterprise should support the creativity and experimental forms of working. One of the common features of innovative enterprises is that they have an agile structure. Innovation efforts from creative thinking to commercial dimensions should be taken into consideration in order to bring all of these features to the organization. (Demirci, 2012: 10).

Innovation management is performing activities under the control of internal and external environment of enterprises to adapt to the changes in the irregular and complex structure, as well as administrative activities within a process mobilizing innovation (Drucker, 2003: 120). Innovation management is the development of specific management techniques to encourage employees for innovation. Innovation management is a business strategy for the culture, structure, and operation of all kinds of task to be done in the innovation processes that affect the direction of cover. (Tekin and Durna, 2012: 94). It covers all areas of the organization, aspects, workers and is a process that requires uninterrupted attention and effort. (Bülbül, 2012: 159).

The size of the organization is considered as an important factor whether the organisation is innovative in any terms of determining. However,

consensus is not provided either in large-scale or small scale organizations to encourage innovation. According to some authorities, small scale organizations such as "flexibility and creativity" does not have the characteristics of large-scale organizations. On the other hand, it is defended that large-scale organizations have the sources with which they will be able to employ the most qualified technical professionals. (Tekin vd, 2003: 149).

3.3. Innovation Strategies

Despite the strong and sharp difference created by innovation phenomenon as a process and dynamism, it is important to transfer "new" and "changed" to the one strength/resistance as priorities. This situation created many habits explain individual and social and cultural sense of social formation and the historical process. As institutions, organizations and companies with innovation philosophy and principles work with higher profitability come into prominence with high performance, market dominance and strong competitive advantage, in the same way that nations, regions and people take their places with the same comparison in historical process in the same way (Baykara, 2014: 138).

Enterprises which innovation provides a competitive advantage by making innovation strategy of sustainable competitive advantage on. Innovation strategies are described as guides the decisions related to the development of business plans and the ability to use the technology as well as it is defined as content which sheds light on technological developments and determine the ideas in competitive environment, efficiency in sources and their effects. (Adıgüzel, 2012: 68). Continuous change and development concepts at first glance evoke the phenomenon of innovation. Enterprises that can provide innovation and competitive advantage innovation increase their strategy of sustainable competitive advantage. Enterprises may tend to change over time innovation strategies under the terms of the changing

internal and external environment, also it can be seen that they can use more than one strategy at the same time (Deniz, 2011: 151-152).

Firms that have a variety of alternative strategies can use different combinations of scientific and technical capabilities and resources. Long term or short term thinking can be given more weight, they can get various alliances. They can be found in the market and technological foresight and can develop new products and processes. They may change even a small amount of world science and technology, but their innovation efforts or competitors may not be able to predict the results exactly (Durna, 2002: 125-126). Innovative businesses make shares and profits thanks to their product and process innovations in the large market. Their competitors who do not want to fall back in the competition try to imitate the new products or processes in part. In this context, businesses want to move first in the marketplace, they try to imitate the leader; if they want, they take place in innovation activities. Therefore, enterprises must determine the suitable innovation strategy which will guide them in their activities, structure. (Güleş and Bülbül, 2004: 175).

3.3.1. Aggressive Strategy

This strategy is a new product or a new manufacturing process developed and marketed before offering technical field and intended to take over the leadership in the market. This strategy needs to be the company's worldwide presence within a privileged relationship with the science and technology system and be based on developing a strong research. Be sure to take advantage of new technical possibilities and advantages provided to know quickly. In addition to the expectation of likelyhood of high incomes of the firms which adopting the aggressive strategy, high risk high returns is also a likelihood (Örücü et.al. 2011: 63).

According to Lumpkin & Dess, an aggressive attitude provides an enterprise to enter the market in which competitors are strong, to be a player who decided in the field of activity of competitors and to act successfully to protect and improve their market share. It takes courageous steps in line with the objectives of the market price reductions, abandonment of its profitability. (Deniz, 2011: 151-152).

Aggressive communication speed and efficiency implementation is of great importance. Flexible and informal communication sructure inside the organizatoin makes innovation efforts more effective. In addition, the continuous, fast and accurate flow of information outside of organizations makes it possible to expedite decision-making process in the nature of the new product to be worked on and accurate timing and financing (Durna, 2002: 129). An enterprise adopts and offensive strategy depends largely on research and development activities because it becomes research intensive. It should be able to bear high costs resulting from inevitable unsuccessfulness of research and development activities because it aims to gain monopoly profits. (Güleş and Bülbül, 2004: 176).

3.3.2. Defensive Strategy

They don't want to be the first defensive innovators around the world, but at the same time they don't want to stay behind in technical change. They don’t want to bear the risk of being the first and they hope to take advantage of the first innovator’s market and failures that they do. Innovators who follow defensive strategy can detract the capacity of innovation; more original type or production engineering or marketing can have a special power or ability (Örücü et.al., 2011: 63).

Enterprises which follow copycat innovation strategy usually follow certain innovations from a distance using information and technology available. Expectation of expiration of patents in the innovations preserved

under patents is the result of this strategy. In this way, enterprises do not pay any license fees. These kind of enterprises can achieve more profit from the imitation innovation if they can find new markets. (Örücü et.al., 2011: 63). The starting point of this strategy is to avoid high r & d costs and risk from radical innovation. A firm which follows this strategy prefers to make improvements in the current technology rather than making technological innovations, in other words, it prefers progressive innovation rather than radical innovation. (Deniz, 2011: 155).

Defensive strategy does not mean there is not r & d. Defensive strategy can be at least as research intense as an aggressive strategy. However, differences are in quality and timing of the innovation. Defensive innovators do not want to be behind the wave of thecnological changes and they do not focus on being the first in the world. They do not want to be under the burden of costs which may come out as a result of first innovations, preferably they consider to exploit the faults that inoovators do. (Güleş and Bülbül, 2004: 177). Patents are a bargaining chip against innovative defensive tool for defensive innovators because pioneer patents are a critical method in technical leadership in the preservation and continuation of the position. (Durna, 2002: 135).

3.3.3. Imitative Strategy

They are not going to put up with low labour, material, works with energy and investment costs and high r & d costs. These companies' success in the market depends on their ability to operate with low-costs. The most important problems faced by firms following this strategy relates to the determination of obtaining information about changes in the market, the choice of innovation imitated and the enterprises from which know-how is being taken (Deniz, 2011: 155). Imitator enterprises should have some specific advantages in order to enter the market in way of competing

innovative and institutionalized enterprises. These advantages may vary from cost to market advantages (Durna, 2002: 138).

Imitator enterprises are the ones which follow the innovative companies and tend to work with low-cost labour, materials, energy and investment, more resource allocation to r & d enterprises. It is a strategy based on ways to take advantage of ınnovation activities of leading business than the investment license and so on. Therefore, enterprises which implement this strategy do not have market dominating technology most of the time. It is important to obtain the costs dominance in the implementation of this strategy. (Güleş and Bülbül, 2004: 177). It is seen that imitator strategy is used widely as a tool for intensive and sustainable competition in market in which the technology developes and changes rapidly. Compaq is being counted among the companies that can successfully implement the imitative strategy in PC market, and IBM is the most mimicked company in original PC market usually under the name of the lowest price and the highest quality. (Adıgüzel, 2012: 68).

Imitative strategy usually focus on imitations of new products and services developed outside by others. This strategy is a strategy used by many companies in order to avoid the risk of R & D and innovative work and cost. However, this strategy does not have a positive impact on creativity of the enterprise due to the fact that it is based on the basis of imitation the productions rather than innovation. However, the company will be able to provide a structure to a certain extent following new developments in that it requires to have a technology which facilitates monitoring and simulating the outside innovations (Uzkurt, 2012: 89).

3.3.4. Dependent Strategy

Enterprises that implement this strategy do not attempt to imitate or make a change regarding the products they produce. The enterprises that

apply this strategy do not attempt to change or imitation in products they produce. Full-dependent enterprises operate as part of an innovative company. Although they seem to have weak bargaining power, they can achieve large profits with low overheads, entrepreneurship and their specialized capabilities due to local advantages. (Güleş and Bülbül, 2004: 177). Enterprises applying this strategy, in terms of technological innovation, work as the satellite and sub-enterprise of a business. If there is demand from customers, they make changes in the features of the product and they offer service to the market. (Deniz, 2011: 155).

Dependent strategy is a strategy that can be used in a way that can provide a competitive advantage for enterprises in growth or downsizing strategy. Enterprises fully implementing dependent strategy operate completely in the form of a strong company in terms of technology and innovation department. For example; a textile company with a strong business structure and market share may use another company's coating plant as self-dependent. Or it can use another company's distribution facility in a different market to spread out of their markets. (Ülgen and Mirze, 2007: 297-298). Accepting a dependent enterprise as a side industry organization and maintaining customer relationships can be beneficial in the direction of reducing the impact of economic fluctuations. Though these enterprises have weak bargaining power in response to lower general and administrative costs and enterprise capabilities, they can provide specialized knowledge and adequate profit due to specific local advantages.

3.3.5. Traditional Strategy

It is a strategy that is based on professional capabilities rather than scientific studies. There will be no change in case of lack of market demand or being forced to change. Changes are the designs in terms of fashion rather than technological changes. However, such enterprises may face high demand the due to their traditional skills (craft skills). Bu, that is very difficult

to live in high level of technological innovation and technology dependent industries. They are excluded in their industry over time because of the impact of innovation other enterprises do. (Güleş and Bülbül, 2004: 177-178). Traditional enterprises shall operate under severe competitive conditions close to perfect competition model of economists. Moreover, such enterprises are fragmented by local monopoly dominated by poor communication, lack of work under the conditions of a developed market economy and the capitalist system. (Turna, 2002: 142).

Enterprises that adopt traditional strategies are often the ones which are running in the regional and monopolistic style. These enterprises base their activities on professional skills and abilities. Although these enterprises are similar to dependent enterprises, they are different in the quality of the products. The most important difference between dependant enterprises and enterprises that follow the traditional strategy arise from the quality of the product. There may be significant changes in the design and products of a dependant enterprise depending on these specifications coming from outside. Whereas, a business following a traditional strategy does not deem it necessary to make change due to the absence of a demand of change and a warning factor in competition, thus having no reason for change. This transmission also developed a new technique that is different from "fashion" and can make some changes in terms of design. (Akgemci and Güleç, 2010: 150).

3.3.6. Opportunities of Monitoring Strategies

It is a strategy that is based on an opponent's weakness and tries to find unexplored aspects of the market. The enterprises that follow this strategy are extravert and they constantly research new market opportunities. They benefit from opportunities that are unobserved or left open by leaders in rapidly changing markets, even though they are not as effective as their competitors, they make changes capable of answering to competiton. This

strategy has a high probability of success for the enterprises in entrepreneurship. (Güleş and Bülbül, 2004: 178). Opportunistic monitoring strategy across the military strategy to attack in a way is similar to looking for weaknesses and gaps. It can often be very difficult one other entity of the company to compete directly in the same innovation. (Durna, 2002: 144). Under this strategy, enterprises are looking for their weaknesses and gaps in a position of competitors, the strategy is based on finding undiscovered aspects of the market. These strategies seek to maintain business rival of weaknesses to exploit the same technology and analyzes the presence of each other. The effective implementation of the strategy, which is a high possibility of success with this strategy outmaneuver their opponent's weaknesses, and it is possible to increase the market share. The enterprises following this strategy are extrovert and are constantly in search of new market opportunities. (Akgemci and Güleç, 2010: 150-151).

3.4. Determinants of Innovation Management

The attention of senior management within the organization is required to accommodate and support innovation orientation.The reason why employees reject the idea of change and a general direction in innovation is because of traditional methods in which standard procedures and tight control are used to control and make inflexible plans for the future, thus the traditional system in which employees avoid risk, value new formations with traditional views,and those who promote employees based on the traditional system must be removed. . (Naktiyok, 2007: 216). Tidd, Bessant and Pavitt cosolidate elements which create innovation success and advocate that these assets are signs of existance of innovative organizations. It is possible to sepecify these elements: (Tekin vd, 2003: 149):

3.4.1. Vision

The quality which is argued by the ones who say they are different from others in areas such as policy, art, economy, management, and appreciating them, adopting, watching and steering them is called vision. (Akdemir, 2012: 48). Vision is expressed in concepts such as ‘appearance, ideal, prudence and clear sight’ in the dictionary. (TDK, 2015). Vision means, in context, sentiment, power of seeing the future and imagination. Vision is a futuristic picture of the organization, imagination close to reality and an art to see the unseen future. (Acar, 2006: 11).

The vision of an enterprise should be related closely with innovation vision. These should support and strengthen each other. Innovation should be used as a catalyzer in order to reach the level that an enterprise wants to reach in the future. Innovation helps the enterprise to put its potential power into being. (Kırım, 2006: 85). Vision is a statement of the organizations’ broader picture which is an art form that shows the near reality dream or the art of seeing the unforeseeable truths. Qualified goal is vision. Bright future that we want to achieve is vision. (Akdemir, 2012: 48).

It is said that the vision of the organization serves the following main objectives:

- Clarifying the direction of change in organizations,

- Moving employees in this direction,

- Contributing to the establishment of strategies,

- The actions of co-workers help to be motivated,

- Supporting innovation,

- Creating a driving force and habits,

- Leading the way to and integration,

- Showing direction and path lighting. (Doğan, 2008: 95-96).

Vision is to benefit from the advantages of seeing the future and creativity by the employees of the organization and the customer base that is aimed for. Shared vision instills the workers willpower, self-confidence and responsibility. (Biçkes, 2011: 178). Customers make the necessary improvements in vision and direction of the organizations' goal is to have realized the advantage of the creative tension between creating a potential reason foresight to members of both organizations. To create and protect towards fulfilling the vision and leadership function will be always a strategic responsibility. The vision created in an enterprise is going to be a glue for conflicting units. (Durna, 2002: 186).

3.4.2. Leadership

In order to mention leadership, there should be a group of individuals, their shared aims that they want to achieve and a leader. Besides, this person should have the knowledge, ability and personal traits to make the others work voluntarily without forcing them. (Bolat and Seymen, 2003: 62). Leadership is a way behind the creation of future and managing the complicacy. Leaders should form teams. Leaders lead the way of organization via teams. In this aspect, leadership is an action between people with small groups or individuals. It is the communication to affect behaviour and performance. (Gürsel, 2014: 68).

In the narrow sense, leader can be defined as the one who puts the common ideas and desires of a group into being as an adoptable aim and acuate them around this aim. (Koçel, 2011: 508). In a broader sense, leader is the one who fights with the socially moulder elements surrounding him

externally, natural or gains effective elements surrounding him internally, and achives to control them and wins freedom, and who lives an ethic movement which he puts in the center of responsibility in innovative movement which has been chosen by his freewill and has formed his ideal. (Kırmaz, 2010: 209).

The leaders treat their subordinates as individuals in the first place in an organisation. Personality and character are the specialties symbolizing the human social development. The most important feature that distinguishes man from other living beings is a social entity. People can continue their lives and coexist helping each other. Community development degree reveals one's relation with people in the surrounding area. When people with this qualification enter a society, the possibility of their becoming a leader with their ability to persuade and influence increase. (Alkın, 2006: 16-17). Leaders bring innovation to the organization, with these actions, they are accepted and appreciated by their teams. (Şişman, 2002: 6).

Leaders should have some qualifications based on innovation in an innovative organization. Leaders are in close and constant relations with employees in this kind of organization. Innovations are not only the job of laboratories' or r&d's in our time, they have become the job of every section, group or individual. Besides, in an innovative organization, flow of information should be fast and constant, innovations should continue as a process. (Durna, 2002: 180).

3.4.3. Organization Structure

Organizational factors should support innovative thinking in order to make innovation in an organization. In other words, while there are organizational elements blocking non-innovative organizations, there are organizational elements supporting the innovation in innovative organizations. The elements blocking innovative actions in an organization can be counted as higher managements' fear of risks, unrestful of creating

homogenism and questioning status quo, focusing on parts rather than whole, short time perspective, a systematic process of creativity thinking extreme trying to make rational, inappropriate motivation factors and excessive bureaucracy. (Naktiyok, 2007: 215).

Organizational structures carry significant importance in developing organizations' innovative quailities. Organizations may need to make arrangements in organizational structures and processes. While making these arrangements, internal features and external environmental factors should be taken into consideration. Innovations are not ending studies, due to the fact that they are processes that continue constantly, they need to search for the best structure and processes for themselves. (Adıgüzel, 2012: 77).

Innovations, in organizational context, are considered as the organizations' reaction against changes in internal and external factors, by doing so, as the organization's decision and action to affect its environment. At the same time, an organizational innovation is encountered as a factor contributing information exchange with internal and external interlocutors, learning abilities, business efficiency and quality. This aspect of innovation will make significant gains from the performance of organizations. (Uzkurt, 2012: 66). Innovation involves ideas that create the future. Unless the managers who seek it take time to learn it from the past, innovation search doomes to extinction. To balance using the innovations for its interests and making searches needs to be paid attention for organizational flexibility and relations. (Kanter, 2014: 166).

3.4.4. Organizational Culture

Organizational culture is the system of norms, behaviours, beliefs and habits which lead people's behaviours in an organization. Culture gives people the feeling and intuition of understanding what they should do and

how they behave. In other words, organizational culture is dominating values and beliefs shaping members' ideas and behaviours. (Güçlü, 1996: 148). Culture connects the emoployees in an organization in achieving organization's aims. If culture fails to fulfill its role, it is weak and in this case, people's loyalty to organization and to each other decrease. Therefore, culture plays an important role in the success of decision making, strategy, plans and policy creation. Because, faith and loyalty of employees are strong and similar to each other. The ones who resemble each other create a small group and conect to each other with loyalty. In organizations where employees believe in the formation of a strong culture, employees feel stronger and more energetic. (Eren, 2004: 137).

The organizational and managerial priorities of the innovation can be understood from the value system prevailing in. The value system of the organization constitute the corporate culture shapes people's ideology and beliefs. Value systems are expressed through values and values of the enterprise mission, goals and strategies determine the choice. Value systems prevailing in the organization encourage creativity and innovation; or for some reasons arising from the status quo does not give importance to these values. (Durna, 2002: 207). Choosing the right people and establishing a dedicated team are the basic steps to create new business relationships, but it is also important to pay attention to other behaviors shaping power. Beyond the new business relationship, dedicated teams, which often differ from those performance metrics of performance engine, it also requires incentives and cultural norms. (Govindarajan and Trimble, 2014: 31).

3.4.5. Communication

In a broad sense, communication is a system that forms the basis of the social structure, which displays a tool that allows the orderly functioning of individual behavior and organizational and managerial structure and is defined as a technical affecting. The integrity of the communication structure

and organization is a process that surrounds every aspect of the organization as a nervous system. (Gürsel, 2013b: 27).

Close ties are needed to enter comprehensive communication with customers. This means communication will be multiway (downward, upward, horizontal) and will use many channels. Especially because of failing in the communication between different functional elements, there happen many problems in the innovation process. Developing mechanisms in order to improve communication and openness, and to analyze the frequency of conflicts is a critical factor for innovation process. (Durna, 2002: 219).

3.4.6. Personnel Strengthening

Personnel strengthening is the applications and conditions in which the employees feel they are motivated by themselves; knowledge and expertise increase their confidence, they feel the desire to take action using initiative, they believe they can control events and do things they deem appropriate and meaningful for the purposes of the organization. (Çuhadar, 2005: 3). Personnel strengthening can be defined as the process of developing cooperation, sharing, training and teamwork to improve the rights of people with decision-making. (Koçel, 2011: 414).

Personnel strengthening, in order to achieve the organizational goals and values, is organizational commitment to ensure the satisfaction of customer demands and improve the process, the confidence of the personnel and ability to assume ownership and responsibility is within well-defined limits. Personnel strengthening is defined as the employee being the authority and the owner of their work with complete responsibility regarding their work. (Akçakaya, 2010: 149). Strengthening can be defined as giving power, developing participation concepts such as quality circles, task teams. However, it refers to the participation of many more. It represents the degree emplyees make their own decisions and be responsible for their results. The

purpose of the strengthening is to reveal everyone's creative and intellectual efforts in the organization and is entrusted with the responsibility to use the resources. The ultimate aim is to strengthen self-management of the employees, who work at this point and try to proactively full responsibility, observe their own work and use consultants and administrators as teachers and growers. (Durna, 2002: 201).

Strengthed personnel characteristics are determined in Quinn and Spreitzer's research as follows:

- Strengthed personnel can tell the ideas of free will

- Strengthed personnel knows the importance of his work,

- Strengthed personnel has information about the adequacy,

- Strengthed personnel should know how to affect their business, (akt. Doğan, 2003: 182-183).

Personnel strengthening are conditions which enable personnel to feel motivated, knowledgeable and increased confidence in their expertise, they feel the desire to take action, use initiative. It highlights the purposes that they and their organizations they can control and to do things they deem appropriate and meaningful. (Koçel, 2011: 416). Personnel strengthening provides many benefits, both to the organization and to the staff. Personnel who feel safe and self-confident would be more useful to the organization. When the same staff has duties, powers and responsibilities, their ability, creativity and controlmechanism develop. So, both employer and employee will gain. Energy will become a synergy. The decision on the organization will be quick, it will increase work flexibility, internal and external customer satisfaction will increase, it will promote activity and end clumsiness in the organization, it will receive the organization's dynamism, competitiveness will

increase, and alternative products and business opportunities will emerge. New technology will benefit from increased opportunities, will be covered with clear information, knowledge sharing will be extreme, will benefit from information technology and competition will increase. (Akçakaya, 2010: 150).

3.4.7. Customer Focus

The concept of customer focus is used to express the situation where customer needs and the demands of the company's production activities. Customer focus can be described as an organization's focus on constantly gathering information about the needs of customers, situation about the competitors, and as using this information for creating customer values. There is a positive relationship between customer focus and customer satisfaction. (Adıgüzel, 2012: 90).

Customer focus must be formatted in line with internal and market dynamics in the direction of future development not only in the present value chain circumstances. Such an approach encompasses everything from the design of a new product to abandoning the products that don't meet the needs of the customer and to meet the additional demand which may come from customers. Thus, the real value may be given to provide in terms of customer loyalty. Performance and profitability measurement should be focused on the customer. The measurement of how swiftly an activity is unnecessary if it has meaning in the eyes of the customer. (Marangoz, 2010: 42).

3.5. Innovation Management in Education

In this section, innovation and innovation management in education and educational institutions are discussed.

3.5.1. Education Management

Education management feature arises from the distinctive features of other management training. As well as education, human is the most important issue in education management. (Gürsel, 2013: 79). Education management can be described as application of decisions and policies determined by human and material sources and using them effectively in order to reach the educational organizations to the determined aims. (Ağaoğlu, 2011: 7).

Application of decisions and policies determined by human and material sources and using them effectively in order to reach the educational organizations to the determined aims is called education management. (Akın, 2006: 13). Educational management involves the management of all the places in the education system and educational system is created to meet the educational needs of a community organization. The management process tries to be managed effectively in educational institutions which are in place, training programs are implemented effectively, training services, personnel management, budget, buildings, vehicles and equipment of the methods developed for use in an efficient manner. (Ilgar, 2005: 14).

The reason for the emergence of deal branches of educational management is that they have different characteristics from other organizations. These properties can be listed as follows:

- Education is a service directly and closely involved with people.

- The main aim of the school is to transfer cultural knowledge to individuals to develop their creativity.

- Process and product evaluation in educational institutions is difficult.

- Various materials and methods are essential tools for regulating the teaching-learning process in educational institutions.

- Education, which is a social, economic and political initiative tries to impact groups in need.

- The teaching staff of the school consists of teachers who perceive themselves as experts in the field and who have received vocational training.

- Fulfilling the same function, there are many sub-organizations in education institutions.

As a result, education is seen as a response to people's current and future life. It is a process of achieving a change in human thinking and behavior in the desired direction. It is for human and community benefits and the thought and effort creating behavior change to increase productivity and compliance with tomorrow in mind. In our era, the value of education in terms of individual is considered the nation's happiness. (Duman, 2002: 15).

As a result of technological developments of modern civilization and rapid progress, as in other disciplines, new developments have become a necessity in education. (Halis, 2003: 7). In this respect, education management according to the principles of modern management is imperative. Schools are the places where general education in a proper manner is given and it is the same for the purposes of the Turkish National Education organizations. This is also the process of organization of training activities carried out in coordination with training management coming into play. (Duman, 2002: 18). For the expectations of the education system to come into fruition the material and human resources entering the system must be used in the most appropriate format. (Gürsel, 2012: 1). Educational management requires policies in schools with lower concepts of contemporary.

3.5.2. School Management

School is the common name of the institutions undertaking the process of educating individuals in society. Schools are institutions of formal education. Including a group of students in the school community and academic activities of the programs presented and prepared in advance according to the needs of the individual, it aims to form desired changes in student behavior. (Çalık, 2003: 5). The school is the door open to the public and face to public education organization. Therefore when schools' problems and social problems reflect upon one another the effect can be seen without delay. The effects of this problem begin to be heard at the top level in the organization of education after they are heard in school. (Yanık, 2008: 12).

In education done in schools; information, capability, behavior and values are viewd as abstract and taken as a foundation to be granted through education. (Erdoğan, 2002: 82 Schools are defined as the systems that receive various inputs from society and adapting to the inputs, outputs qualified people again for the service of society and also systems which are open to inputs and change when necessary. (Akkaya, 2011: 20).

The school which is considered to be an open system of social features are as follows; (Ağaoğlu, 2011: 9-10):

- There is an environment in which the school is affiliated.

- School survives by taking inputs.

- Students started the educational process in accordance with the objectives of the national education in schools.

- The output of the school is students' behavior.

- Output is like the community, the resulting value will be the school's entry again.

- Schools need to be developed to determine the direction of society and the students.

- The school is in constant interaction with its environment.

- As with any systems, there are sub-systems in the school.

Therefore, the school's main job is education and training should be expected from the students and teachers should emphasize what is appointed to school culture. School climate, managers, teachers, students and their behaviors are the internal features that distinguish them from other schools. (Çelik, 2003: 33). This property, in addition to the necessity of the contemporary education of school management, needs to be managed in a democratic way. The school is the most basic social institution in the socialization process after the family. These institutions carry the responsibility for the realization of certain learning patterns. School succeeds as long as it provides individuals with education they need in order to maintain a peaceful life. (Halis, 2003: 8).

The basic functionality of schools is to offer predetermined knowledge, skills and attitude, in a certain order and coordination with individuals. This task both diversifies and expands the responsibilities of schools. Schools are required to perform these tasks based on fundamental philosophical education system. Schools are obliged to become practitioners of the development of pioneering and innovation. (Akkaya, 2011: 21).

School management is application of education in a limited area in a way. The purpose of the education system draws the boundaries and structure of this area. As the education management is determines the

application of management education, the school board also consists of the implementation of school educational management. The importance of school management arises from the management of the task. The task of the school management is to run the school according to its aim. (Çalık, 2003: 5).

The physical structure of the school, appearance, usage should be attractive and appropriate in terms of adequate health conditions. Clean, well-maintained and well-equipped schools affect behaviors and morale. Considering physical structure and characteristics of the school, managers and architects have reported different opinions. These opinions can be assessed by comparing the learning needs and educational goals. Sink, toilet, as well as areas and tools should be appropriate to students' developmental characteristics. (Başar, 2005: 20). School resumes its life taking inputs. These inputs are the raw materials with which students work; the teacher provides the educational services, and business professionals provide the necessary tools to produce educational services, physical environment for lighting, heating, cleaning, businesses and educational technology. (Gürsel, 2013: 80).

School management directly affect classroom management. Teachers can help them to improve their ability to develop school administrators and teachers who know better than anyone else. This is important as it can make a positive impact on classroom management. (Akın, 2006: 14). School also has to respond to society's expectations because it is in constant interaction with its environment. To know the characteristics of the school as an organization offers a better understanding of the training function. (Bursalıoğlu, 2010: 33).

3.5.3 Innovation Management in Education Institutions

Even though there are attempts and work being done in terms of public reforms and modernization within public agencies, there is no

possibility to speak of an integral innovation policy. However, there is a need for the public, beyond reform and event expansion, a complete innovation policy within the interactions of public agencies, private foundations and non-governmental organizations concerning their learning and creativity. What affects European countries' innovation policies are their systematic approach to learning and renewal. According to this approach; technological development and talent development; different firms, institutions, finance resources and concerned agencies are involved in mutual interactions and can be characterized as learning together (Akyos, 2007: 3).

The EU encourages regional and national governments to put innovation into action with necessary powerful measurements and instruments. These regional and national innovation systems and mechanisms are created with a wide range of follow up. Many European Union initiatives have taken a key role in emphasizing the importance of innovation, the nature of it and the research and development policy. For innovation, the vital role of education and teaching has been emphasized on the EU platform again and again. To present the latest European Union policy works in high education systems and the modernization of the reforms for "innovation capabilities" and "innovation friendly environments" requires the education and learning policies (Shapiro vd,2007: 3)

Science, technology and environmental changes force the people to both change and renew. Just as it is with every system, the education system also requires change and renewal. Education institutions are institutions which have a much greater field of service. Hence, why does the applicability of education service capability affects the entirety of society? The broadest perspective in education innovation is social change and the most specific approach is the change in how an individual acts (Göl and Bülbül, 2012: 99)

Global change brings education more into the spotlight. While education is viewed as a continuation of prosperity in wealthy countries, in less wealthy countries it is viewed as a driving power. As financial competition and the breaking of social values grows, the expectation for schools to improve current performance will also grow (Bentley, 2008: 205-206). Another important topic is innovation and economic and social development have a central position. Analyzing the importance of the benefits of education and learning is to view innovation in a broader aspect which will yield better results (Shapiro et al., 2007: 5)

According to Watt (2002) schools are creative, risk taking and continuously self-improving and improving their surroundings due to the innovative individuals within. Schools are innovative thanks to the open-minded, trusting and supporting personnel, principals and deputies who are tied in with the education of their students. Schools are entrepreneurial and have a risk taking soul, open, supporting in cooperative approaches in learning and teaching with new methods of teaching and resources which require application due to the culture and the state they are in. Schools are innovative because they give way to innovative thought, support them and promote the sharing of knowledge and flexible enough to allow innovations from outside the regular mold. (akt. Göl and Bülbül, 2012: 99)

When the term innovation in education is thought, it would not be incorrect to be said that it is an event that started with the history of education. When innovation, which plays a key role in economic and social development, stops; expansion stops, economy and communities let up. Economists emphasize large scale innovative program investments in education for the development of national economies and continuation. For a while, innovation has been a topic that catches serious attention for a while now. Along with this, successful innovation is fed and grown with human creativity, knowledge and skills and in a wider perspective education is what provides these (Kurtuluş, 2012: 19).

Within the framework of innovation and creativity of schools, educational institutions must be teaching-learning environments in which students feel free. Learning and teaching environments need to be organized in a manner that allows a students to develop their creativity. For this; teachers and parents should apply appropriate strategies in learning environments to ensure many aspects of thinking for children. For creative thought to become into existence; research, questioning and complete learning strategies, pin-point debating, example events, show and repeat methods, small and large group debates, discussions, creative drama, showing, making, experimenting, inspecting, brain-storming and problem solving methods can be run in an educational environment (Erdem, 2005, 189).

The information and requirements for innovation depend on what the innovation is and how it is viewed. The contributions that teaching and learning provide for innovation will increase as long as they are adapted to certain regional and local applications. There is large agreement upon the notion that an individual's capacity for innovation is connected to certain skills, attitude and values but it is also agreed that there is a relationship between these factors and organizational environments. This organization and planning and the use of information technologies for communication contains the creation of new ideas, free movement within team working, or research subjects. This kind of skill and properties are supported by personal traits such loyalty to people or a mission, good behavior, integrity and ambition (Shapiro et al., 2007: 37).

The factors for innovation within education and teaching can be listed as such (Looney, 2009: 4):

- The social and financial pressure that raises the level of success which requests the fairness of all students
- The change in work, social and family life

- Motivating students and drawing their interest

The successful path to the application of learning innovation has shown the individual to be dependent on several skill factors. One of these takes systematic degree as a foundation, for example; education systems and institutions. To provide innovation in education, learning, structures, the norms and the policies have been placed in a larger context. If new application needs in education are in tune with one-another or are evaluated in a closed way, they will provide greater success in pilot areas when it is applied for the purpose of a wider aspect of teaching and learning.

SECTION 4

METHOD

In this section explanations of research models, data collection methods, data collection tools and their properties, research data collection and analysis will be given.

4.1. Research Model

This research is based on quantitative data in Karatay, Meram, Selçuklu districts of Konya upon the faith of administrators regarding innovation management. Scanning models are research approaches that aim to describe past or present events and situations the way it is. The individual, object or event that is subject to the research is attempted to be described within its own terms (Karasar, 2005:77).

This research was conducted in the general scanning model. General scanning model is described by Karasar (2005: 82); It is to come to a judgement about a certain universe with the use of the entirety or a sample of that universe with scanning models used to place a conclusion on it. In the scans local and foreign literature have been evaluated. The views of the source groups are towards a situation in a certain time.

4.2. Universe and Sampling

The universe of the study consisted of directors and administrators (principals and deputies) from Konya province, Karatay, Meram, Selçuklu districts, (n=245). Simple coincidental sampling techniques were used in understanding the representative power of the group within the universe.School administrators and deputies serving in Konya provinces' Karatay, Meram and Selçuklu districts (principals and deputies) whom form this universe; (n=150) are thought to be able to represent a %5 tolerance

level in 0,05 meaning in a universe made up of school directors' and deputies (Balcı, 2004:95).

$$n = \frac{\frac{t^2.(P.Q)}{d^2}}{1 + \frac{1}{N}.\frac{t^2.(P.Q)}{d^2}} = \frac{\frac{1{,}96^2.(.25)}{.05^2}}{1 + \frac{1}{245}.\frac{1{,}96^2.(.25)}{.05^2}} = 150$$

4.3 Properties of Research Sampling

After the survey, 150 valid survey forms were gathered from school principals and deputies. The demographic information regarding the statistical data of these surveys are listed below.

As seen in table 4.1 below, % 21, 3 of directors are female and 78,7 are male. 72% of the directors were undergraduates and 28% were postgraduates.

Table 4.1 The spreadsheet of director frequencies

Director	Frequency (f)	Percentage (%)
Gender		
Female	32	21,3
Male	118	78,7
Education status		
Undergraduate	108	72,0
Postgraduate	42	28,0
Other		
Position Title		
School principal	93	62,0
Deputy principal	57	38,0
Professional seniority		

0-5 Years	12	8,0
6-10 Years	31	20,7
11-15 Years	52	34,7
16-20 Years	35	23,3
21 Years and over	20	13,3
Age		
20-30 Years	20	13,3
31-40 Years	58	38,7
41-50 Years	50	33,3
51 Years and over	22	14,7
School seniority		
0-5 Years	87	58,0
6-10 Years	44	29,3
11 Years and over	19	12,7
0-5 Year	87	58,0
6-10 Year	44	29,3
11 Years and over	19	12,7
Number of students in school		
Between 1-500	72	48,0
Between 501-1000	78	52,0
Number of teachers at school		
Between 1-30	18	12,0
Between 31-50	71	47,3
51 and over	61	40,7
General Total	150	100 (%)

62, 0 % of the directors titles are school principals and 38, 0 % make up deputy principals. The professional seniority is as presented; 8,0 % 0-5 years, %20,7 6-10 years, 34 % 11-15 years, 23 % 16-20 years and 13,3 %

21 years and over of seniority. The 13, 3 % 20-30 years, 38, 7% 31-40 years, 33, 3 % 41-50 years 14, 7 51 years and over form the ages of the directors. The seniority in the schools which directors work in are 58, 0% 0-5 years, 29, 3 % 6-10 years and 12, 7% 11 years and over of seniority. The 12, 0% 1-30, %47, 3 31-50 and 40, 7 % 51 and over form the number of teachers at school where directors work.

4.4 Data Collection Tool

Thesis papers, books, essays and other sources were scanned and the relevant literature was examined to benefit the research. The sources indicated in the bibliography were completely reached by the researcher.

The measurement system of school directors' faith in innovation management was developed by Bülbül (2011). The measurement is made up of 32 questions and 4 dimensions. Before the measurement was applied, AFA and DFA analyses were made. According to the exploratory factor analysis, factor analysis might not be suitable for all kinds of data structures For the factor analysis of the data suitability, Kaiser-Meyer-Olkin (KMO and Barlett's Tests) test was conducted (KMO=, 888, sig=000). The KMO resulted over 60 and the Barlett test was meaningful. When communalities are inspected as factors, we can see that the n=32 matters' eigenvalue greater than 1 is formed under four factors. The communalities declared by these four factors is 68, 9%. However the given four factors' mutual communalities vary between 0,549 and 0,818. When the Component Matrix table is inspected, the general of these 32 matters' first factor's charge value varies between 0,482 and 824. This finding shows that the measurement has a general factor.

Table 4.2 Measurement and analysis of directors' faith regarding innovation management results. (DFA) Validity and Trustworthiness Analysis Results

Matter	Factor	Factor	Value after Conversion

No	Mutual Communality	Charge Value	GYY	YS	OKY	PY
1	,552	0,482	,691			
2	,633	0,497	,713			
3	,605	0,537	,748			
4	,549	0,538	,693			
5	,665	0,559	,733			
6	,650	0,556		,728		
7	,732	0,566		,716		
8	,692	0,622		,787		
9	,703	0,637		,760		
10	,783	0,642		,796		
11	,755	0,658		,778		
12	,705	0,659			,753	
13	,783	0,679			,842	
14	,737	0,681			,799	
15	,663	0,686			,743	
16	,818	0,688			,845	
17	,656	0,703			,725	
18	,671	0,709				,789
19	,681	0,718				,810

20	,603	0,719				,747
21	,735	0,725				,834
22	,757	0,725				,850
23	0,671	0,73				,807
24	0,767	0,748				,855
25	0,667	0,755				,806
26	0,645	0,759				,794
27	0,668	0,762				,792
28	0,737	0,773				,845
29	0,654	0,792				,804
30	0,606	0,802				,777
31	0,760	0,812				,850
32	,754	0,824				,837
Declared Communality total=% 68,9 GYY=% 31,85 YS=%14,40 OKY=% 13,16 PY=% 9,51			Kaiser-Meyer-Olkin (KMO)=,888 Bartlett's Test of Sphericity Approx. Chi-Square=9408,653 df=496 Sig=,000			

Another proof a general factor is the first factor caused 36 %,62 communality. However, under the four matters, for the means of easier recognition, (rotated component matrix) the input management questions 1-5 (GY), innovation strategy questions 6-11 (YS), organizational culture and

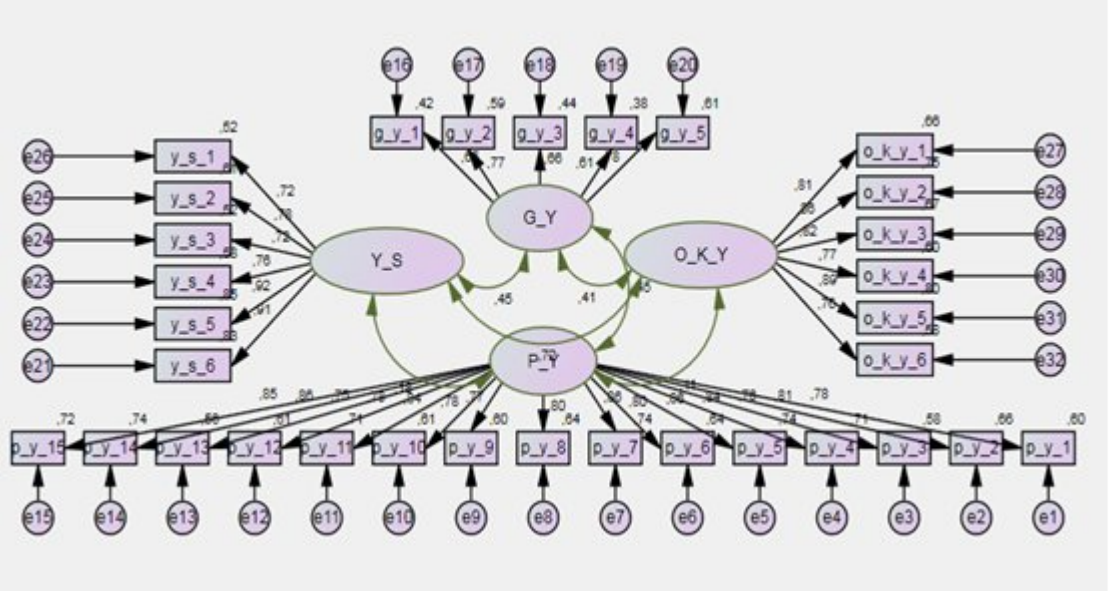
structure questions 12-17 (ÖKY) and project management questions 18-32 (PY) and four factors showed their high charge value.

Faith can be classified as the consistency between the answers given for the test items. Faith is relevant to how correct the test has been conducted on whichever property it seeks. The tests' calculated faith factor (r) correlation is used to identify the individual differences and the degree of correctness or incorrectness they are based upon. The directors' faith in the sufficiency of innovation management factor resulted as (r=942). The test results show differences of 94, 2 % in correct and % 5, 8 in incorrect. Table 3.3 contains the bottom dimensions of the confidence factor. The measurement in question Kuder Richardson-20 (KR-20) and Cronbach alpha (α) confidence results .70 and higher test scores are generally enough in reliability.

After these analysis, another correcting factor analysis was conducted (DFA). As seen in table 4.3, value p has was meaningful. Value X2\df is compatible between 0 and 2. However, between 0 and 5 is also an acceptable compatibility value. Analysis value (X2\df=4,706 value is an acceptable compatibility value.

Table 4.3 Directors' Faith in Efficiency of Innovation Management Measurement DFA compatibility Index Analysis Results

Independent Factors	2155,250	458	,000	4,70	,73	,06	,82	,10



The compatibility index based on the remains (GFI) is the compatibility value between, 95 and 1, 0. Only, the values between 90 and 95 are acceptable as compatibility values. The (GFI=,73) result from the analysis is a successful result for the model and among the inspected variables and this means the necessary covariance has been calculated. Again, the SRMR values based on the compatibility index 0 and 0, 5 are compatible values. It is a successful result of the analysis for the (SRMR=, 06) model. For the independent compatibility index (CFI) model ,97 and 1,0 are good compatibility. Only , between 95 and,97 are acceptable compatibility values. As it get closer to 1 it shows the compatibility gets better. The analysis result is a good value for the (CFI=8,2) model. Near error median square root (RMSEA) between 0 and 0,5 are compatible. Only 0,5 and ,10 and in-between values are seen to have compatible values. After the analysis the result (RMSEA=,10) is a successful result for the model.

4.5. Processing of the Data

The values gathered via the measurement tools, are processed in SPSS 22.0 for Windows Package program and the data has been analyzed.

To determine whether or not two unrelated examples medians have meaning or not, “t test” is used (Büyüköztürk, 2005:39).

The directors used the t test to determine if there is a significant change according to “gender, education level, professional title, student count”. When more than two groups are compared, in unrelated examples the one way communality analysis (ANOVA) was used for analysis. In situations where there are significant changes the LSD (post hoc) test was used to determine which groups had differences. The ANOVA test was used to determine if there is a significant change regarding directors’ professional seniority, age, school seniority and teacher count (Büyüköztürk, 2005: 48).

The correlation factor is used to determine and interpret the relationship between two variables (r=, 30 and +,30 low relationship, r= +,31 and +-,69 medium relationship r=+-,70 and +-,1,0 high relationship) (Büyüöztürk, 2005,32).

Regression analysis explains two or more related variables or one dependent variable and the other independent variable separation and shows the relationship in-between to be explained with mathematical equality. (Büyüköztürk, 2005:91).

The significance level of the research was taken as p<0,05. The results received after the analysis were presented in tables to be interpreted.

SECTION 5

FINDINGS AND DISCUSSION

In this section, the analysis results and findings and interpretations of directors' belief regarding innovation management are presented.

5.1 Directors' Faith Regarding Innovation Management

In this section, the directors' faith in efficiency of innovation management, gender, education level, professional title, professional seniority, age, school seniority, student count and teacher count analysis is handled.

5.1.1 Directors' Faith in Efficiency of Innovation Management and Interpretations According to the Gender Variable

Directors' faith in efficiency of innovation management are grouped according to the gender variable and two "independent t-tests" have been conducted. In table 5.1 t test results according to gender variables are listed. Directors' innovation management faith in efficiency are generally close to one another.

Table 5.1 T Test Table Results by Gender Variable

Size	Variable	N	X	ss	Sd	t	P
Input Method	Woman	32	3,0750	,49187	148	1,087	,279
	Male	118	2,9814	,41509			
Innovation Strategy	Woman	32	3,1875	,50145		,632	,529
	Male	118	3,2525	,52064			
Organizational and Cultural Structure	Woman	32	3,1969	,45613		,264	,792
	Male	118	3,2229	,50475			
Project	Woman	32	3,0000	,40321			

Management	Male	118	3,1068	,40271		1,330	,186

- P<0,05 is the meaning of the relationship on the level of compatibility

It can be seen that medians do not make much difference statistically. The meaningfulness of the t values in this analysis p (values) being more than 5% makes no significant difference. The directors' confidence in the efficiency of innovation management based on gender makes no significant difference. In other words, female and male directors' views are on par with their faith in innovation management. There are attempts of directors to find support from public foundations for innovation work in schools and to present the school as compatible with its surroundings. The results also showed that the school staff, students and guardians re in contact, follow up in the field of educational innovations and share this with all students. Principals also convince deputies on the matter of renewal and innovation and, whether male or female, personnel give the necessary attention to this topic and form a mutual understanding.

5.1.2 Findings and Interpretations According to Education Status Variable of Directors' Faith in the Efficiency of Innovation Management

The directors' faith in the efficiency of innovation management was grouped according to their education status and two "independent t tests" were conducted in table 5.2 the education status variable of directors' are located.

Table 5.2 T test results according to the Education Status Variable

Dimensions	Variable	N	$\bar{x}$	Ss	Sd	t	P
Input Management	Undergraduate	108	3,0389	,45464	148	1,716	,088
	postgraduate	42	2,9048	,35678			
Innovation strategy	Undergraduate	108	3,2898	,52453		1,967	,051
	Postgradu	42	3,1071	,47287			

	ate						
Organizational Culture and structure	Undergraduate	108	3,2370	,45991		,783	,435
	postgraduate	42	3,1667	,57368			
Project management	Undergraduate	108	3,1167	,38146		1,597	,112
	postgraduate	42	3,0000	,45047			

*p<0,05 meaning of significance in relationships

It can be seen that the difference between medians have no statistically significant meaning. This analysis shows that the compatibility value being greater than 5% makes no substantial difference. The directors' education status regarding innovation management does not show any noteworthy difference. In other words, undergraduate and post graduate directors' views on innovation management are in the same direction. Whatever the graduation of the director, in the field of educational renewal and innovation, all school staff work with similar effort, make the innovation a vision known by all, and put effort for maintaining strong relationships between all school staff and provide a listening ear to create a mutual understanding and effort towards innovation.

5.1.3 Finding and Interpretations on Directors' Faith in Innovation Efficiency Regarding Variables in Professional Titles.

Directors' faith in efficiency of innovation management and the professional title variable has been grouped and two "independent group t tests" were conducted. In table 5.3, t test results based on the professional title variable are presented. The directors' faith in innovation management is generally in the same direction with one another.

Table 5.3 Test Results Based on the Professional Title Variable

Dimensions	Variables	N	$\bar{x}$	Ss	Sd	t	P
Input Management	Principal	93	2,9957	,42322	148	,203	,839
	Deputy Principal	57	3,0105	,45106			
Innovation Strategy	Principal	93	3,2151	,45107		,715	,476
	Deputy Principal	57	3,2772	,60887			
Organizational Culture	Principal	93	3,1817	,43787		1,130	,260
	Deputy Principal	57	3,2754	,57205			

and Structure							
Project Management	Principal	93	3,0462	,37636		1,469	,144
	Deputy Principal	57	3,1456	,44162			

*p<0,05 meaning of significance in relationships

It can be seen that the medians between differences have no statistical meaning. The t value that comes out of this analysis shows that a %5 or higher value in the (p value) compatibility have no significant change. The directors' faith in innovation management does now show any difference with professional title variables. In other words, principal and deputy principal's views are in the same direction with each other.

Whatever the titles of directors, their motivation in teaching and effort, their effort to keep staff who support the idea of innovative ideas, expectation of innovative ideas do not just come from an individual but from the whole school. Efforts in convincing the school staff that risks taken will turn into benefits and suggesting to use the school resources in a profitable way can be said to be the reason they share similar perspectives on the matter.

5.1.4 Findings and Interpretations on Directors' Faith in Innovation Efficiency Regarding Variables in Professional Seniority

Directors' Faith in Innovation Efficiency Regarding Variables in Professional Seniority variables and medians are given in table 5.4. When the directors' medians are examined we can see that there aren't differences in professional seniority groups.

Table 5.4 Professional Seniority Variables according to averages

Dimensions	Variable	N	$\bar{X}$	SS
Input Management	0-5 years	12	2,95	0,37
	6-10 years	31	3,04	0,40
	11-15 years	52	2,95	0,40
	16-20 years	35	3,05	0,48

	21 years and over	20	3,01	0,53
	Total	150	3,00	0,43
Innovation strategy	0-5 years	12	3,47	0,49
	6-10 years	31	3,19	0,53
	11-15 years	52	3,13	0,45
	16-20 years	35	3,41	0,60
	21 Years and over	20	3,15	0,43
	Total	150	3,24	0,52
Organizatinal Culture and structure	0-5 years	12	3,15	0,31
	6-10 years	31	3,26	0,52
	11-15 years	52	3,20	0,48
	16-20 years	35	3,21	0,58
	21 years and over	20	3,25	0,44
	Total	150	3,22	0,49
Project management	0-5 Years	12	3,16	0,57
	6-10 Years	31	3,05	0,37
	11-15 Years	52	3,00	0,32
	16-20 Years	35	3,17	0,43
	21 years and over	20	3,15	0,47
	Total	150	3,08	0,40

Along with this, to inspect the statistical accuracy of the professional seniority variable one way ANOVA (ANOVA) was done.

In table 5.5 from the point of professional seniority, the difference between medians of directors has different levels of meaning. According to these results we can see that there is no statistical meaning among these variables.

Table 5.5 Anova results based on the professional seniority variable

Dimensions	Source of Change	Total of squares	Degree of Indepen	Average of squares	F	p	difference

			dence				
Input management	Between groups	,282	4	,070	,370	,830	-
	In-between groups	27,598	145	,190			
	Total	27,880	149				
Innovation strategy	Between groups	2,494	4	,624	2,436	,050	-
	In-between groups	37,122	145	,256			
	Total	39,616	149				
Organizational culture and structure	Between groups	,154	4	,038	,155	,961	-
	In-between groups	36,121	145	,249			
	Total	36,275	149				
Project management	Between groups	,804	4	,201	1,240	,297	-
	In-between groups	23,498	145	,162			
	Total	24,302	149				

*p<0,05 meaning of significance in relationships

It is understood that directors share the same direction in the professional seniority variable. Whatever the directors' professional seniority, their sincere appreciation of nnovative people in schools, viewing the entire school staff's view on innovation with respect, openly appreciating individuals who are innovative, giving importance to what will bring innovation to the school, carefully choosing the tools in the renewal process, being ready for unseen results can be said to form a cost/harm analysis agreement.

5.1.5. Findings and Interpretations of Directors' Faith in Innovation Management According to the Age Variable

The average according to the directors' faith in innovation management regarding the age variable is given in table 5.6. When the age average is inspected, differences can be spotted among age groups.

Table 5.6 Average by the age variable

Dimension	Variables	N	$\bar{X}$	SS
Input management	20-30 Yaş	20	2,84	0,48
	31-40 Yaş	58	3,03	0,39
	41-50 Yaş	50	3,02	0,45
	51 Yaş ve Üzeri	22	3,01	0,46
	Total	150	3,00	0,43
Innovation strategies	20-30 Yaş	20	2,92	0,45
	31-40 Yaş	58	3,18	0,45
	41-50 Yaş	50	3,42	0,55
	51 Yaş ve Üzeri	22	3,28	0,53
	Total	150	3,24	0,52
Organizational Culture and Project structure management	20-30 Yaş	20	3,12	0,51
	31-40 Yaş	58	3,23	0,45
	41-50 Yaş	50	3,14	0,47
	51 Yaş ve Üzeri	22	3,45	0,57
	Total	150	3,22	0,49
Project Management	20-30 Yaş	20	3,05	0,46
	31-40 Yaş	58	3,01	0,37
	41-50 Yaş	50	3,1	0,41
	51 Yaş ve Üzeri	22	3,27	0,39
	Total	150	3,08	0,4

Along with this, the one way commonality analysis (Anova) test was conducted to determine the statistical differences and average between directors.

In table 5.7 the meaning of the directors' differences between the averages is listed. According to these results, the difference between averages are statistically significant in the bottom dimension of innovation strategy (F=5,237). There is a significant difference according to the ages of the directors. In other words, directors' views on the innovation management age difference variable bottom dimension are on different paths.

Table 5.7 Anova Table Results According to Age Variable

Dimensions	Source of change	Total of squares	Degree of independence	Average of squares	F	p	Difference
Input management	Between Groups	,611	3	,204	1,091	,355	-
	In-between Groups	27,268	146	,187			
	Total	27,880	149				
Innovation Strategy	Between Groups	3,849	3	1,283	5,237	,002*	1-2 1-3 1-4
	In-between Groups	35,767	146	,245			
	Total	39,616	149				
Organizational Culture and Structure	Between Groups	1,649	3	,550	2,318	,078	-
	In-between Groups	34,626	146	,237			
	Total	36,275	149				
Projects management	Between Groups	1,110	3	,370	2,329	,077	-
	In-between Groups	23,192	146	,159			

	Total	24,302	149				

*p<0,05 Means the significance

The post hoc test (LSD) conducted to understand where this difference comes from showed that the source is the 20-30 year old, 31-40 years, 41-50 and 51 years old on the lower dimension of the innovation strategy.

5.1.6. Findings and Interpretations According to Directors' Faith in Innovation Efficiency Management Based on School Seniority Variable

In table 5.8 the directors' faith in innovation efficiency management based on the school seniority variable is shown. When the directors' averages are examined, differences between seniority group can be observed.

Table 5.8 Averages based on School Seniority Variable

• Dimensions	• Variable	• N	• $\bar{X}$	• SS
• Input Management • Innovation Strategy	• 0-5 Year	• 87	• 3,03	• 0,39
	• 6-10 Year	• 44	• 3,06	• 0,50
	• 11-15 Year	• 19	• 2,74	• 0,35
	• Year	• 150	• 3,00	• 0,43
• Organizational Culture and structure • Project management	• 0-5 Year	• 87	• 3,22	• 0,51
	• 6-10 Year	• 44	• 3,35	• 0,52
	• 11-15 Year	• 19	• 3,	• 0,5

			08	0
	• Total	• 150	• 3,24	• 0,52
• Input management • Innovation strategy	• 0-5 Year	• 87	• 3,25	• 0,49
	• 6-10 Year	• 44	• 3,23	• 0,47
	• 11-15 Year	• 19	• 3,04	• 0,53
	• Total	• 150	• 3,22	• 0,49
• Organizational Culture and Structure	• 0-5 Year	• 87	• 3,10	• 0,44
	• 6-10 Year	• 44	• 3,13	• 0,38
	• 11-15 Year	• 19	• 2,89	• 0,22
	• Total	• 150	• 3,08	• 0,40

Alongside this a one way commonality analysis (ANOVA) test was conducted to determine the difference between directors averages and understand if these differences have statistical meaning or not.

In table 5.9 the level of differences between directors averages based on the school seniority variable are given. According to these results, only input management (F=4,318) has statistical significance on the lower dimension of averages in-between. There is a significant difference according to directors seniority in school regarding input management. In other words, directors express different views on input management based on their respective seniority status.

Table 5.9 Anova Table Results according to the School Seniority Variable

Dimensions	Source of change	Total of squares	Degree of independence	Average of squares	F	p	Difference
Input Management	Between groups	1,547	2	,773	4,318	,015*	1-3 2-3
	In-between groups	26,333	147	,179			
	Total	27,880	149				
Innovation Strategy	Between groups	,991	2	,495	1,885	,155	-
	In-between groups	38,625	147	,263			
	Total	39,616	149				
Örgütsel Kültür ve Yapı	Between groups	,673	2	,336	1,389	,252	-
	In-between groups	35,602	147	,242			
	Total	36,275	149				
Project Management	Between groups	,813	2	,407	2,545	,082	-
	In-between groups	23,488	147	,160			
	Total	24,302	149				

*p<0,05 Means the significance

The post hoc test conducted to determine the source of this difference expresses that the source can be directors with 0-5 years, 6-10 years and 11-15 years of seniority. It can be said that with directors innovation management, the difference in opinions can be caused by the inability to hire

an outside consultant on innovation, lack of physical areas to provide support in works towards innovation and failing to procure necessary equipment.

5.1.7. Findings and Interpretations According to Directors' Faith in Innovation Efficiency Management Based on Student Count Variable

The directors faith in innovation management and efficiency was grouped based on the student count variable and 2 “independent t tests” were conducted. In table 5.10 t test results based on the gender variable are displayed. Directors' faith in innovation management efficiency averages are generally close to one another.

Table 5.10. T test results according to the student count variable

Dimensions	Variable	N	$\bar{X}$	Ss	sd	T	P
Input management	Between 1-500	72	3,0500	,39254	148	1,327	,186
	Between 501-1000	78	2,9564	,46448			
Innovation Strategy	Between 1-500	72	3,3236	,47516		1,957	,052
	Between 501-1000	78	3,1603	,54160			
Organizational Culture and structure	Between 1-500	72	3,2222	,43645		,116	,908
	Between 501-1000	78	3,2128	,54352			
Project Management	Between 1-500	72	3,1056	,37899		,627	,532
	Between 501-1000	78	3,0641	,42700			

*p<0,05 Means the significance

5.1.8. Findings and Interpretations According to Directors' Faith in Innovation Efficiency Management Based on the Teacher Count Variable

Directors faith in innovation efficiency management based on the teacher count variable is given in table 5.11. When the directors' averages are examined, differences can be observed in teacher count groups.

Table 5.11 Averages according to the teacher count variable

Dimension	Variable	N	$\bar{X}$	SS
Input management Innovation management	Between 1-30	18	3,07	0,36
	Between 31-50	71	3,04	0,48
	51 and over	61	2,94	0,39
	Total	150	3,00	0,43
Organizational Culture and Structure Project Management	Between 1-30	18	3,56	0,51
	Between 31-50	71	3,26	0,55
	51 and over	61	3,11	0,43
	Total	150	3,24	0,52
Input Management Innovation Strategy	Between 1-30	18	3,29	0,36
	Between 31-50	71	3,23	0,53
	51 and over	61	3,18	0,48
	Total	150	3,22	0,49
Organizational Culture and Structure	Between 1-30	18	3,20	0,46
	Between 31-50	71	3,10	0,41
	51 and over	61	3,03	0,38
	Total	150	3,08	0,40

Along with this, one way commonality anlaysis (ANOVA) was conducted to determine the statistical significance between directors' averages based on the teacher count variable.

Table 5.12 displays the directors' significance level and the difference between averages. According to these results, the statistical significance

difference between averages is in the lower dimension of the innovation strategy (F=5,701). There is a significant difference in the directors innovation strategy according to teacher count lower dimension. In other words, directors' have different views based on the teacher count variable.

Table 5.12 Anova Table Results according to the teacher count variable

Dimensions	Source of change	Total of squares	Degree of independence	Total of squares	F	P	Fark
Input management	Between groups	,387	2	,194	1036	,358	-
	In-between groups	27,492	147	,187			
	Total	27,880	149				
Innovation strategy	Between groups	2,851	2	1,426	5,701	,004*	1-2 1-3
	In-between groups	36,764	147	,250			
	Total	39,616	149				
Organizational culture and strategy	Between groups	,170	2	,085	,346	,708	-
	In-between groups	36,105	147	,246			
	Total	36,275	149				
Project Management	Between groups	,417	2	,209	1,284	,280	-
	In-between groups	23,884	147	,162			
	Total	24,302	149				

*p<0,05 defines the level of significance

The post-hoc (LSD) test conducted determine the source of this difference shows that teachers between ages 1-30, 31-50 and 51 and over can be said to be the source. In directors' innovation strategy based on the number of teachers, it can be said that directors and school staff have a different view because of the inability to get (service education, seminars etc.) surrounding private foundations (trade associations, civil society organizations etc.).

5.2. Relationship Between Directors' Faith in Innovation Management

In this section, the analysis of directors' faith in innovation management and efficiency input management, innovation strategy, organizational culture and structure, project management was conducted and analysed to see if there is a significant relationship.

Generally it can be seen that directors' input management have a relation and positive dimension and in the middle dimension (r=,676, p<,01); Innovation strategy is between positive and mid level (r=,663, p<,01); organizational culture and structure is between positive and mid level (r=,627 p<,01); project management postive and high level (r=,879, p<,01)

Table 5.13 Correlation Table Belonging to The Relationship between Directors and Teachers regarding Innovation Management Efficiency

(Correlation)	GY (Director)	YS (Director)	OKY (Director)	PY (Director)	General (Director)
GY (Director)	1				
YS (Director)	,358**	1			

OKY (Director)	,446**	,201*	1		
PY (Director)	,434**	,441**	,356**	1	
General (Director)	,676**	,663**	,627**	,879**	1

*sig. (2-tailed)<0,05 , **sig. (2-tailed)<0,01

5.3. Directors' Faith in Innovation Management Predictability Regarding Demographic Variables

In this section, analysis was conducted according to demographic variables in directors' faith in innovation efficiency.

Table 5.14 Prediction of Multi Regression Analysis Table of Directors' Faith in Innovation management

Variable	B	Standard Mistake	**B**	T	P	Coupled r	Semi r
Constant	2,925	,176	-	16,586	,000	-	-
Gender	,046	,065	,056	,706	,481	,069	,059
Education Status	-,136	,059	-,184	-2,288	,024	-,165	-,187
Professional title	,082	,055	,120	1,492	,138	,118	,123
Seniority	-,009	,025	-,031	-,373	,710	,050	-,031
Age	,084	,031	,227	2,738	,007	,222	,222

R= ,312 R^2= ,097 F (5,144)= 3,101 p=,011

The analysis results of Prediction of Multi Regression Analysis Table of Directors' Faith in Innovation management is given in table 5.4. The R value represents the correlation between the dependent and independent

variables. This value being high explains there is a strong relationship between the dependent and independent variable or the significance of the independent variable within the dependent variable. In the table, the value (R=,312) is an indication of significant positive relation between the dependent and independent variable. The value of the R square variant is expressed as 0,9 by the dependent variant as we can see in table 14 (R^2=,097). The meaning of this is that it explains % 0,9 variant in the dependent variable.

According to the standardized regression factor (β); the predicting variables in directors' faith in innovation management efficiency visual ranking of importance is; age, education status, professional title, gender and seniority. When the t tests are examined for regression factors, only education status and age seems to have a significant effect on predictions. Professional title, gender, rank of seniority have no effect.

When the dependent predictability variables and coupled variables and semi correlations are examined; directors' faith in efficiency of management in innovation and the relation between gender and age is a positive and low level relationship (r=,07), the relationship between directors' faith in innovation management efficiency and education status have a negative and low level relationship, directors' faith in innovation management efficiency and professional title have a positive and low level relationship (r=,12), directors' faith in innovation management efficiency and seniority have positive and low level relationship (r=,05), directors' faith in innovation management efficiency and age have positive and low level relationship (r=,22).

Innovation management and faith in efficiency predictions are given below (mathematical model) according to regression analysis results. faith in innovation management efficiency (Director)= 2,925 + ,046*Gender - ,136*Education Status + ,082*Professional Title - ,009*Seniority + ,084*Age

SECTION 6

RESULTS AND RECOMMENDATIONS

The following results determined in this research are aimed at understanding the directors' faith regarding innovation efficiency in Karatay, Selçuklu and Meram districts of Konya province.

When attributes of the research samples are examined, men form more than half of the directors. They are generally undergraduates. Seven out of ten directors are principals. Their professional seniority are six years and above. Their seniority in schools are mostly between zero and five years. They have a student count of five hundred and one and more. The number of teachers is over thirty one.

6.1 Directors' Faith Regarding Innovation Efficiency Results

This section will have results related to variables such as gender, education status, job title, seniority, age, seniority in the school, the number of students in school and the number of teachers in school.

6.1.1. Results of Gender Variation in Relations to Directors' Faith Regarding Innovation Efficiency

Directors' Faith Regarding Innovation Efficiency does not differ significantly in relations to gender. In other words; the view of both male and female directors in relation to the innovation management skills are in the same direction. We can say that the directors have found a common understanding adopting factors such as trying to find support for the schools innovation activities from the surrounding public institutions, assuring that the accommodation and consolidation with the surrounding to be seen as an intermediary of the schools innovations, to be in touch with the schools staff, students and parents during this innovation process, following up on the new

developments in the field of education, then sharing them with the rest of the teachers, and the principals convincing the vice principals regarding innovation through communication.

6.1.2 Results of Educational Status in Relations to Directors' Faith Regarding Innovation Efficiency

Directors' Faith Regarding Innovation Efficiency does not differ significantly in relation to educational status. In other words; the view of undergraduates and postgraduates in relation to the innovation management skills are in the same direction. We can say that no matter what the directors' educational status is, they have found a common understanding adopting factors such as putting effort to help all of the school staff understand the new innovations in the educational system, working so that the school, and all of its staff will have and share a innovation vision. They put effort to create strong bonds among the staff so a sense of ownership can be formed.

6.1.3 Results of Professional Title in Relations to Directors' Faith Regarding Innovation Efficiency

Directors' Faith Regarding Innovation Efficiency does not differ significantly in relation to Job Title. In other words, the view of principals and vice principals in relation with the innovation management skills are in the same direction. We can say that no matter what the directors' job titles are, they have reached a mutual agreement with factors such as clearly encouraging education and effort that leads innovation, putting effort to keep staff members who support and have adopted innovation ideas, expecting innovation ideas not only from a single person or a group but from all of the school staff, trying to get the whole school staff to believe that any risk taken for innovation will return as a benefit, and ensuring that all of the schools sources are used as sufficiently as possible during the innovation process.

6.1.4 Results of Seniority in Relations to Directors' Faith Regarding Innovation Efficiency

Directors' Faith Regarding Innovation Efficiency does not differ significantly in the lower dimensions. In other words the directors share the same view in the professional seniority variable. No matter what the directors' professional seniority is, we can say that they have reached a mutual agreement with factors such as appreciating innovation individuals in school, being respectful to all of the school staffs creative and innovation ideas, carefully selecting the materials and resources that will be used in the innovation process, being ready against any unforeseeable results that the innovation process can have, analyzing what the innovation will provide cost/benefit.

6.1.5. Results of Age in Relations to Directors' Faith Regarding Innovation Efficiency

Directors' age regarding innovation strategies differ significantly. In other words directors' view on age variables are in a different direction in relation with innovation strategies lower dimensions. The directors' have different opinions on aspects such as trying to reach outside information for new innovations by hosting various activities for all of the school staff (in-service training, seminar etc.) ensuring they attend and trying to get support from private institutions (trade associations, non-governmental association) for innovative activities.

6.1.6 Results of Seniority in the School in Relations to Directors' Faith Regarding Innovation Efficiency

According to directors' seniority in the school, there is a significant difference regarding input management. In other words, directors' views on input management are in different directions. In the analysis that was

conducted to determine the source of these differences; in the lower dimension of the input management directors whose seniority is between 0-5 years, 6-10 years and 11-15 years can be said to be the source.

It can be said that directors and school staff have a different view because of the inability to get in-service training and seminars fromsurrounding private foundations (trade associations, civil society organizations etc.).

According to the scores of Directors' Faith in Innovation Management Student Count Variable, directors' faith in innovation management does not show difference in regards to the number of students present in a school. In other words, schools that have 1-500 students share the same view on innovation management capabilities as those with 501-1000 students. It can be said that whatever the number of students in a school is, the emphasis on the importance of innovation by staff, explaining the benefits that innovation can bring to school and its surroundings, embracing a mutual point of view and mutual decision making, continually inspecting the contributions of staff in times of innovation, cooperation between staff members while working towards innovative ideas can be factors for their views.

6.1.7 Results According to the Number of Teachers in Schools Directors' Faith in Innovation Management

There is a difference in the lower dimension of directors' innovation strategy according to the number of teachers in schools. In other words, the teacher count variable causes views to be in different directions. It can be said in the analysis that the source of this difference is administrators who have employed approximately 1-30 and 31-50 and 51 and over. In directors' innovation strategy based on the number of teachers, the failure in the acquisition of books, magazines, necessary information required for

innovation, the quick end to innovative projects with the thought of not being beneficial to the school can be said to be the cause of different views.

6.2 Directors' Faith in Innovation Management Efficiency and the results of Relationships in between

Results show that generally; directors have a positive and medium relationship with input management, positive and medium level relationship with innovation strategy, positive and medium level relationship with organizational culture and structure and a positive and high level relationship with project management.

6.3. Results According to the Demographic Predictions on Directors' Faith in Innovation Management and Efficiency

According to the analysis results only one tenth of the commonality can be described of the dependent variable. According to the standardized regression factor (β); the ranking of importance of predictability variables are; age, education status, professional titles, gender and seniority. When the t tests are examined to estimate the significance of regression factors, only education status and age have any significant effect on the predictability directors' faith in innovation management efficiency. Professional title, gender and seniority do not have any significant effect. When coupled predictions, variables, correlations and semi correlations are examined, directors' faith in innovation and efficiency and gender have a positive and low level relationship, directors' faith in innovation and efficiency and education status have a negative and low level relationship, directors' faith in innovation and efficiency and professional title have a positive and low level relationship, directors' faith in innovation and efficiency and seniority have a positive and low level relationship, directors' faith in innovation and efficiency and age have a positive and low level relationship. Also, according to analysis results,

the predictability of faith in innovation and efficiency regarding regression equality (mathematical model) is given in the findings section.

6.4 Suggestions

In this section suggestions regarding gender, education status, school type, professional title, professional seniority, age, school seniority, number of students in school and number of students in the school variables are displayed.

Suggestions Towards Application

- Directors' can be given courses seminars and in-service training for innovation management.

Suggestions for further Research

- Directors' faith in innovation and efficiency can be based on district national education administrator, provincial national education administrator or ministry center administrators.

- The source groups evaluating directors' capabilities on innovation management differently must do research into the reasons of these differences.

- Universities must develop information gathering tools and standardize related models in the field of innovation management.

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