

## **DISABLED PERSONS AND THEIR POSITION AT THE CONSTRUCTION EDUCATION**

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### **ABSTRACT**

Nowadays, we can hear the word “quality”, many different times and subjects, in our daily life. For example, business, education etc. To provide quality at the education and business life, firstly it must be realized this slogan “suitable work, suitable person”.

In this paper, firstly disabled persons and after relation between construction sector have been examined. Choosing conscious job isn't only a paper which is calling “diploma”, at this situation it can be said easily that “it will never use, for a work” after graduation. The aim must be a suitable job for him/her and their ability, wish and also their physical position. Afterwards, can be formed output at the education and business life.

Therefore, in this paper these important subjects have been examined:

- Disabled persons, disable varieties and definitions,
- Disability in the law,
- Business areas for disabled persons,
- To fix kinds of disability, especially construction sector.

This paper also includes, the results of meetings with some construction firms(which are serving different sectoral areas), by using question form.

Disabled persons, must have education, of course. But, for happy and productive life, must head towards suitable job.

Key words: Disability, kinds of disability, education, business, construction, output

### **1. INTRODUCTION**

Healthy society come together from healthy persons. If a person loses his/her physical, psychological or mental health, this will be problem for his/her family, also. But, of course every person different each other and has different health position. But, ill, illness and disabled are not the same.

According to United Nation's raport, %10 of inhabitants of the world can be disabled / handicapped persons. So, disabled persons can wish to redesign and put in order the environmental conditions. Unfortunately, they live the same environment with others and there are very difficulties for them.

According to Sweden constitution

“All the society's power come from humans”.

While to talk about society's conscious, we must see and take care the all disabled persons are active and have a capacity, if somebody gives possibility. Human is important. Education's subject is human. So, some questions must answer. These are:

- What is human?
- How can they learn?
- How they can be taught?

### **2. DEFINITION**

At the last years, disabled person's problems take place on agenda. They can mix with society and outside life; they can integrate with social and physical environments.

So, what is the meaning of disabled / handicapped? They have some functional losses at physical, mental and psychological specialities in different proportions. Causes of these can be incomplete and destroyed organ. So, they can not suit with life necessities in some negative environmental positions. Sometimes they need to keep help, look after and educate.

According to United Nations definition of disabled person is :

“Difference between normal person, because of handicap on their physical or mental capabilities; they can not do everything by themselves. This handicap causes can be about inheritance or accident. So, this people is called disabled.”

Disability can not be only inheritance; work, traffic and sport accidents, different injurements, some illness and wars also causes of disability.

WHO (World Health Organization) has determined disability causes:

- Accident at holiday,
- Accident at sea,
- Accident of pedestrian,
- Accident at work,
- Illness of profession,
- Illness of alcohol and narcotic,
- Food,
- Burn,
- Fall down on tree or roof,
- Pregnancy or when the giving birth accidents or misfortune.

If disabled is very heavy position, can not integrate to outside life; his/her connection may only by Windows. In this position house interior must redesign or reorganization according to his/her. But, to improve their life quality, integration to the life and education are very important factors.

## 2.1. Kinds of disability

### A. Physical disableds :

- Orthopedics disabled : In spite of all reforms, they can not profit their skeleton, nevre system, muscle and articulation. They can not harmonize with social life. Causes of this kind of disabilities are; Pregnancy, giving birth process, accidents, central nerve system, brain damages, birth anomaly etc. They may have heavy physical insufficiency which affects performance.
- Walk disabled: They can not move easy or they need some apparatus.
- Disabled which dependent to Wheel chair: they can move only by Wheel chair.

Hand/s or arm/s disability: They can move hand/s or arm/s in a great difficulty or they can not.

### B. Having a difficulties or disabilities about seeing:

- Having difficulties about seeing: They have very less rate capability or their sight(vision) area can be narrow. They can not see without apparatus / glasses. Their vision capacity is less than 3/10.
- Blinds: They can not see. In spite of all correction, their sight capacity is less than 1/10 by two eyes.

### C. Hearing disability:

- Difficulties about hearing: They can hear only hearing aids. Hearing lose level between 25-70dB.
- Deafness: They can not hear. Hearing lose level 70dB or more than.

### D. Talk disabled & mute : Their talking is spoilt by ritm, different shrill, accent and voice control.

E. Mental disability: Sometimes, mental progress can have slow down, hesitation or regression. So, individual's behaviours are different according to can temporary persons. He/she is always insufficient and backward. He/she can learn very difficult and late. Their thinking capability is limited. But, mental disabled person can be educated for sense or action, from the baby process. This can affect the mental progress.

- Intelligence divisions are between 0 -24 (idiot) = heavy mental disabilities
- Intelligence divisions are between 25 – 44 (embecile) = they can be taught.
- Intelligence divisions are between 45 – 75 (debil) = they can be educated.

F. Psychological disability: Because of different causes, they can not conform to life's necessities. They always lose ability and function.

## 2.2. Action capability and environmental organization

Human's activities in daily life, sum up in three groups:

- Personal care activities(action, eating, toilet, dressing, personal cleaning etc.)

- Actions about role(student, architect, teacher etc.)
- Social relations(friendships, hobby etc.)

In addition to these, other personal positions are important. For example; physical and psychological position, years old, sex, family structure, life style, cultural structure, economical position etc. Individual come together with all these specialities. She/he checks his/her emotion/feeling and then wants or not to join with the society. Disabled persons can take in to society; but, this up to environmental inputs. These are, family, friend, society, physical condition, comfortable place.

Physical disabled persons can feel difficulties and balance problem while they are walking; come down, up down at staircases both in buildings or to ehicles, stretch etc.

If disability about seeing, enlighten, contrast, suitable writing are very important.

For blind persons, Braille alphabet, hearing and touching signboard must be used.

For hearing disability, visual informations are important..

In this way, they can feel about environment that easy usage, easy transportation, liveable and understandable.

### **2.3. Aim**

The aim must be integration to the daily / social life as possible. Some specialities must be provided for them. These are;

- Self confidence, independence, organization their life.
- They must join to society as a producer by economically and social side.
- Both his/her family and society must be conscious about disability.
- Local managements, associations must be helper.
- New technology must us efor disability(for example; some apparatus, new operation technics etc.)
- Both disabled person and his/her family must educate psychologically.
- Physical and architectural environments must take care, put in order. Some obstacle must remove.
- Transportation must be easier.
- Some suitable activities must organize for them(sport, hand skills, etc.)
- They can produce some products. There must be some associations for marketing.
- Some causes must be organized. (This must be suitable their ability, capability and of course, disability.
- Profession advisor services must be widespread.
- They must support for having a job.
- There must be relation and coordination between education associations.
- New educational technics and new materials, tools, apparatus must use.

### **2.4. Regulations**

There are some regulations and laws about disabilities. These are;

- Regulations about employment of disableds(Official gazzette, 16.05.1987 date; number:19402) defines all concepts about this subject. There is disabled personal obligation if any place of employment has fifty or more than personals. This disableds must have some characteristics according to this regulations. Their work place and special salary have been determined.  
Disableds is being defined in this regulations : They are deprived of work abilities between min. %40 and max. %70 because of their physical disability. But, they must confirm by health commission, after they can employ. If any place of employment have more than fifty personals, a disabled person must be employed in there, according to regulations.
- There is another regulations about determination, investigation, care and rehabilitation of handicappeds. This is being written by Government Ministry and Child Protection Association General Directorate.
- 1475 : Number, Employe regulations,
- 657 Number, Government Official law.
- 24.02.199 date, 2362 official gazzette, 4369 number; Income tax law.
- Regulations about support of employment.
- Regulations about being retired.

### **2.5. Examples employee for disableds**

- Physical disableds

Quality control, official at booking Office, official at Office, official at cashier's desk, receptionist, kilim weaver, shoes repair, textile employer, official at telephone Exchange, typewriting, computer writer / operator, musician,

- Hearing disabled  
Typewriting, photography, accountancy, technical drawing, masonary, tailor, coiffeur, electrician, etc.
- Seeing disabled  
Computer usage, typewriting, official at telephone Exchange, musician etc.

### 3. EDUCATION

There are many different definition about education, some of them are:

“Education is a human educating process according to specific aims.”

“It aims to change human's behaviour to specific development with some planned effects.”

Another concept about education is “special education”. Written decree (30.05.1997 date, KHK573number) defines this:

“This education suffices disabled people's education needs with qualified personals, developed education programmes and technics and in special buildings for disableds and their specialities.”

This special education is up to kind of disability. This education programme is being delivered in three different forms, both primary and secondary school.

- Different special education schools
- Special classroom at normal schools
- Normal classroom at normal schools(aim is joining with others.)

All alives progresses grow up by communication and effects from environment. For example, baby after giving birth always learns something.

They can profit by both organic and prevalent (widespread) education. Keeping at home is not useful also harmful for them. But, education of disabled person is expensive. Because, they need special education conditions, special rigging, special sources, sufficient and qualified educators, special buildings or reform and reorganized buildings.

Disabled and normal students can not be joined very easy. In this position, teacher has a great responsibility. She/he must be hepler, understanding and joiner.

Handicapped persons want to have some rights as everybody. These are about education at primary, secondary and high-school, also university. They need some aids and interpretership services. These must be suitable for kinds of disabilities. They also want to live don't need another persons help. To be enough for themselves as possible.

Therefore, environmental stimulus are very important, especially for disabled children. Number of stimulant and related to them affects development. Suitable apparatus, buildings and places are very important at education. But, of course this stimulus and environmental datum's shape and characteristic change according to different disability. Environmental datums must be helper and comfortable for them, at school process.

Some orthopedic disabilities can't go to school because of physical insufficiency. They need special education, care, surroindings conditions, implement and apparatus. Generally, in foreign country they are being integrated to the normal classroom. This integration is being applied as a par tor full time. In our Country, there isn't special education support. Only, some students are being integrated. There are Wakf (foundation) and association's schools.

Completing this process isn't very easy, for them. Unfortunately, number of university students are very less. There are many difficulties (Environmental, sources of education, having apparatus, need of helper etc.) at Primary, secondary and high school life. If a person achieve these steps, must decide for conscious pefrence. They must enjoy and wish that division. They must educate as less as difficulties. This means also comfortable profession life. So, choosing division for university must take care. Aim isn't only to win any division at university. Style of education(application, laboratuary, investigation, theory etc.), expectation of students(responsibilities, capabilities, skills etc.) and also place of school, transportation and alternatives must research. Profession and business areas, work places must learn. About employment :

- Study area/subjects,
- Business divisions/departments,
- Additional specialities(for example, some sertificates)
- Style of employment, etc.

At the end of this investigations, choice must be correct and suitable for individual. Target must be determined most suitable. Because, there isn't any advisors and advisor associations or any warning / stimulus by writing. At the end of this, hearing-talking disabled or physical disabled students can come to construction division. Of course, at the university education process there isn't any special education association, special classroom, special educators for them. Disabled students join to normal classroom at the university. They educate in the same condition. This provides to communicate, group study, etc. But, again it must be said that, kind of disability is very important in the education process.

### 3.1. Education of construction

Education is being realized for to reach some aims. Target is very important at the education. Individual's and society's needs must take care. Because, aims must include everything about society's expectation from individual. All students may not be physically or mentally normal. Some of them can have different disability. So, this will reflect to education.

There are connection between his/her education level and success at business area. This relation also interests with location, respect and income. Of course, while the profession choosing step, individual may not think whether it is suitable or not. They can prefer chance upon their division. But, especially disabled persons must be very carefully. Any wrong decision is will be a great mistake. This affects moral and self-confidence.

Construction is a technical division. So, complete this division in a success needs mathematics knowledge, concentration, perception, comprehension etc. Education needs, laboratory, drawing, computer skills and also using organs. Nevertheless, unfortunately, disabled persons will live difficulties in education term. Because, education can not be completed only by reading. So for example, hearing disabled person will not understand subject.

Not only education but business life is also active. Some business area examples are:

- Site(Yard)
- Architectural or engineering office : Drawing : hand skills, computer, exploration, etc.
- Official and other associations
- Building control firms,
- Laboratory
- Contractor firms.

## 4. EVALUATION

Construction division has many alternatives for employment. Every different area needs different skills, abilities, different specialities and also characters. It can be examined as a table.

Disability	Place of work : Office	Explanation
One hand or arm disability	-	Can not be dominated; document, Project, drawing tools must be used. Sometimes, computer skill necessary.
Two arm disability	-	Impossible
One foot / leg disability	+	This may not be difficult at Office, both drawing or calculation. But, furnishing is very important for their moving.
Two foot / leg disability	^^	This may have difficulty moving in the Office, because of furnishing. Especially for Wheel chair. Also, stretching to anywhere, using high level shelf is impossible. But, they can study on the table with two hands.
Illness of eyes; less vision, difficulty about vision	^^	If only one eye has a less vision problem, she/he can work, probably. It is not very easy, but not impossible.
Two eyes problem	-	It is impossible.

Blind	-	It is impossible
Difficulties about hearing	^^	This may have difficulties; understanding subject, communication, definition, explanation... Because of only visual sensation.
Deafness and dumb	^^	Some visual panels must use, this may have difficulties at Office environment.

Table 1: Work at office for disableds.

Disability	Place of work : Construction site	Explanation
One hand or arm disability	-	Arms and hands necessary for safety. Using staircases, sometimes climbing, holding are very very necessary and important actions.
Two arm disability	-	Impossible.
One foot / leg disability	^^	For safety, have difficulties; walking, go up down on staircases, are some actions from construction site. Ground is not uniform, there may be rubble...
Two foot / leg disability	-	It is very dangerous and impossible.
Illness of eyes; less vision, difficulty about vision	^^	May be, but more attention to the hearing warnings are important.
Two eyes problem	-	It is impossible.
Blind	-	It is impossible
Difficulties about hearing	^^	This will have difficulties about understanding of concepts, only visual ability can be insufficient.
Deafness and dumb	^^	“ “ “

Table 2: Work at construction site for disableds

Disability	Place of work : Laboratory	Explanation
One hand or arm disability	-	Preparing tests (experiments), need skill and capability. Using of test sets, tools, material and equipment.
Two arm disability	-	Impossible
One foot / leg disability	^^	Stand up position is necessary while doing tests. This can be difficult.
Two foot / leg disability	^^	Laboratory studies need to stand at the workbench, table. Also, furnishing of laboratory may not be suitable for aid-apparatus.
Illness of eyes; less vision, difficulty about vision	^^	May be, but more attention to the hearing warnings are important. And, sensitive tests need more attention.
Two eyes problem	-	It is impossible.
Blind	-	It is impossible
Difficulties about hearing	^^	This will have difficulties about understanding of concepts, only visual ability can be insufficient.
Deafness and dumb	^^	“ “ “

Table 3: Work at laboratory for disableds

Disability	Explanation
One hand or arm disability	Education is difficult for them. Both hand or

	computer drawing and calculation, sensitive laboratory studies, tests, measuring need hand skills and usage.
Two arm disability	Education is impossible.
One foot / leg disability	Stand up studies will be difficult. For example, laboratory tests. Transportation to school, library can have problems for them.
Two foot / leg disability	Transportation to the school, moving in the school is very big problem. Furnishing is very important.
Illness of eyes; less vision, difficulty about vision	May be, but more attention to the hearing warnings are important. And, sensitive tests need more attention.
Two eyes problem	It is impossible.
Blind	It is impossible
Difficulties about hearing	This will have difficulties about understanding of concepts, only visual ability can be insufficient.
Deafness and dumb	“ “ “

Table 4: Education at construction division for disableds

First semester	Second semester	Third semester	Fourth semester
Material of science and building material	Technology of concrete	Ground mechanics I	Ground mechanics I
Technology of building I	Building architecture and drawing details	Topography	Administration management
General and technical communication	Technology of building II	Reinforced concrete I	Reinforced concrete II
Building static I	Building static II	Steel building I	Steel building II
Turkish language I	Turkish language II	Organization of Office and site	Measurement and investigation works
Principles of Atatürk and revolution history I	Principles of Atatürk and revolution history II	Building installation	Quality, safety and standarts
Mathematic I	Mathematic II	Design by computer I	Design by computer II
Computer I	Computer II	Fine Works I (optional)	Fine Works II (optional)
Science principles of technology	Resistance	Road construction I (optional)	Road construction II (optional)
		Prefabric buildings I (optional)	Prefabric buildings II (optional)
		Wooden buildings (optinal)	Built of stone or brick buildings
		Damage determination at buildings I(optional)	Damage determination at buildingsII (optional)
		Hidrolic (optional)	Water assurance and small churn water
			Analyze and design of system

Table 5 : Lessons at Vocational School at University

Construction sector needs action, everywhere. Always, there are activities. Sector needs skill. Orthopedic disabilities(unless less stage disability) up to dimensions of the place and furnishing. Suitable and necessary areas and dimensions must apply for walking, using apparatus turn, stretch and other activities. Site working is impossible Ground is not suitable. Materials of construction, rubbles are very dangerous for disabled persons. Scaffolding, base on staircases must be use, these are parts of work.

For hearing and talking disabilities also have different difficulties. Communication is very important for both Office and site. Talk about detail, opinion, Project, description of work are necessary. Work accident warning is important and difficult for them.

Construction education for eyes handicapped is really a great wrong. Never they can study.

Mental handicapped persons, unfortunately, can not educate for university. They can only have special education.

For this study, to the 35 different construction firms was being asked; is there any disabled personal at their firm? These firms are, architectural and engineering Office, contractor and concrete firms. Unfortunately, there isn't any disabled personal in there.

Also, there are 3 physical disableds students(leg disability) in construction division, now. They were being asked about their choice; 2 of them are one leg disabled. They are official in the Public sector. They are second education students. Their aim is only being promoted at their employe? They will continue to their employe after graduation. Third student is two leg disabled, she uses aid apparatus: sticks. She is also victim of East Marmara earthquake. She has only a cause about choosing construction division; she is looking for an answer about earthquake disaster? Why many of buildings falled down. She heads towards to computer usage. The best employe will be at Office, especially by using computer both drawing or calculation&measurement for her.

## 5. RESULT

Education subject is "human". Human's ability, capability, skills are very important. Because, human is important as an individual. Human specialities must determine and treat. Namely, diploma isn't enough for everything. Education is not everything, as a process. The main thing is profession life at business sector. So, individual must be suitable for work with job, skills, abilities, additional inputs etc. Job must fit to person's physical, psychological, mental, cultural structure, abilities, family structure, life style, behaviour, benefits, expectations etc. Individual and his/her job will complete each other. For success, there must be advisors or advisors associations. Both individual and his/her family must be educated about disability . They must be conscious at their decision.

New education technics and special education technics must apply. New materials, apparatus, tools must use. For example, special books for blinds ( Braille alphabet) must be at library. Or, hearing disableds must be comfortable by signboard.

Environment must arrange for them, too. Interior and furnishing must be suitable for disabled persons. We mustn't keep them at home. They must join to outside life, with others.

For their happiness, they must be productive in suitable professions for them.

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