



# Erasmus+



## **MANUAL FOR THE DISABLED ADULTS' TALENT AND INTEREST IDENTIFICATION TOOL**

Test Manual For The Disabled Adults' Talent and Interest Identification Tool contains information about the purpose and the construction of the assessment tool, norm group, application and scoring, validity/reliability and evaluation procedures.

Disabled Adults' Talent and Interest Identification Tool is the intellectual output of the Erasmus + Strategic Partnerships for adult education project "Discover Your Talents and Remove "dis" in Your Ability" (Project Number: 2018-1-TR01-KA204-058728). The goal of the project is to develop an assessment tool to identify the talents and interests of disabled adults. The coordinator of the project is Huseyin Husnu Tekisik Guidance and Research Center (Turkey), the project partners are International Institute of Applied Psychology and Human Sciences associazione culturale (Italy), Association for Education and Development of Disabled People (Greece), ARDA Beratung & Beratung GmbH (Germany) and Psihoforworld (Romania).

### **The Purpose and Structure of the Assessment Tool**

In this section, the purpose of the assessment tool and the three connected parts of it is introduced (excel file, video and the manual). Moreover, the development process and the structure of the test items [criteria of admission (critical abilities and interest items) and ability items] are presented.

The assessment tool has the goal to identify talents in people with disability in order to suggest them courses and activities designed to increase their satisfaction for life. The tool is easy to apply and very easy to evaluate with the automatized excel file. Moreover it is clear and understandable with the video and the manual. The tool can be used to offer courses for adults with disability either for vocational purposes or for recreational and educational purposes.

The tool consists of three parts: excel file, video and the manual. Excel file includes test items of 15 different subscales on the first sheet and automatic scoring on the second sheet. The video explains how to apply the tool, how to make the data entry and how to do the scoring in detail. The manual gives information about the purpose, development process, statistics, scoring, evaluation and reporting of the results.

In the development process of the tool we produced the subtests and the items with a deep literature review about talent and interest tests in English, Turkish, Romanian, Greek, Italian and German languages and different types of disabilities; and with the workshops during the project held with the experts in psychometry, psychology, psychological counseling and special education. After the test items have been prepared in English and reviewed by both a British person and also 3 psychologists and special education teachers who have a good command of English, the items have been translated into Turkish, Romanian, Greek, Italian and German languages and administered to 690 people with disability across 5 countries: Turkey, Romania, Greece, Italy, and Germany.

Our assessment tool is based on 15 scales measuring the following talents described below:

- **Sports:** doing sports related coordinated tasks and physical motor body movements
- **Drawing/Painting:** the practice of applying paint, pigment, color or other medium to a solid surface; using various drawing instruments to mark paper or another two-dimensional medium
- **Photography:** the art, application and practice of creating durable images by recording via camera.
- **Gardening:** the practice of growing and cultivating plants.
- **Archiving:** placing or storing (something) in an archive in a determined sequence.
- **Theater:** presenting the experience of a real or imagined event before a live audience in a specific place, often a stage.
- **Music:** expressing thought and feeling through sound, being able to understand and interpret the music, having a musical ear.
- **Dancing:** performing art form consisting of purposefully selected sequences of human movement.
- **Technical abilities:** the abilities and knowledge needed to perform specific practical and mechanical tasks which includes mechanical equipment, or tools.
- **Poetry/Literature:** Reasoning with words, reading comprehension, expressing thoughts clearly with words and the ability to write poems literature works.
- **Sculpture/Handicraft:** making useful and decorative objects by hand or by using only simple tools.
- **Cooking:** the ability to perform tasks related to the preparation of food, which requires preliminary procedures to its cooking, such as washing, peeling, and chopping.
- **Social Skills:** skills used to communicate and interact with each other, both verbally and non-verbally, through gestures, body language and our personal appearance.
- **Computer:** abilities and knowledge of using computers and related technology.
- **Sewing:** the craft of fastening or attaching objects using stitches made with a needle and thread.

### Description of the sample/Norm Group

The sample is well balanced on the variable gender (M = 55,9%; F = 43,9%). According to the disability types the sample is divided into 5 different disability categories: mental, physical, mental and physical, autism, psychiatric. The sample consists of 236 (34,2%) mentally disabled, 164 (23,76%) physically disabled, 63 (9,13%) physically and mentally disabled, 54 (7,82% ) autistic, and 18 (2,60%) psychologically disabled adults.

### Application of the Tool

All scales are independent, and the administrator can decide which scales to administer basing on the situation. The following factors should be considered:

-The goal of the tool is to encourage people with disability to perform activities and courses in a specific area. **Administer only the scales which are related to courses available.**

-All scales include **“Criteria of admission”**, a first subscale is called **“Critical Abilities”**, which are abilities required to access the course. A second subscale is called **“Interest Items”** which measures if the person is interested or not in the activity. The minimum requirements to do the tool is to satisfy *have all the critical abilities* and to *demonstrate interest toward the activity in at least 1 item*. In case of *satisfaction of both criteria*, it will be possible to administer the subscale **“Ability Items”** which actually measures the ability.

The tool has two different forms: parent/teacher form and the disabled adult form. If the adult can understand and respond to the items you can use the disabled adult form and apply the tool with the adults

themselves. If you cannot get response from the disabled adult you can get response to the items from a parent or teacher of the adult.

The assumption of the course is that talent in one area and the involvement in related activities will increase satisfaction for life.

As a general idea of the outcome of the course you can apply the 3-item satisfaction for life scale, based on 3 items on a scale from 1 to 5.

You can use these criteria also to check if the activities performed by the person will increase his satisfaction for life.

## Scoring

In this section, the data entry and scoring process is explained. For more information about the scoring of the tool please watch the video.

The tool is included in an Excel file, available in Turkish, English, German, Romanian, Greek and Italian.

The excel file include two sheets:"

- Data entry
- Automated reporting

Data entry sheet include all items for all scales and demographic information.

For the correct application of automated reporting fill the questionnaire using the number "1" under YES/NO answer. Enter 1 for the "Yes" answers to the items. Don't make any entry to the excel files for the no answers This will allow the document to automatically calculate the results.

The last scale, satisfaction for life is a continuous scale, which is required to ask to give an evaluation from 1 (minimum) to 5 (maximum).

## Evaluation

The automated reporting page (Sheet 2) gives the results of the scale measured. To identify the talents in one specific area you should **compare the results obtained by the person with the sample of subject sharing a specific disability**. In the sheet 2 of the excel file you will see standardization tables for different disability groups. When you look at the standardization table of the adult's disability group, you will see "talent" and "no" at the bottom of the table. "Talent" means that the adult has talent in that area, and "no" means the adult doesn't have a talent in that area.

## Reporting the Results of the Tool

If the adult's score in an area is at the top %25 percentage (over %75 percentage) of his/her disability group, it means that they are talented in that area. The sheet 2 of the excel file reports this results automatically. So, you can produce a report describing the talents of the adult with disability by looking at the standardization tables of the disability group of the adult. As a result of the evaluation of the talents you may face three different situations. The adult may have crystalized talents, talents almost at all areas or no talents in any area.

-If the adults have crystalized talents, they will have talents in a few areas. So you can suggest them courses in those areas.

-If the adults have no talents in any area, you can suggest courses by looking at the points they have got from the sub-scales. You can suggest courses in the area in which they have the highest scores. Don't forget that the aim of the tool is not saying that you are not talented but saying that you are talented in those areas and you can improve your skills in those areas.

-If the adults have talents in almost all areas, you can suggest courses with the highest scores and also talk with the adults themselves and ask their preferences.

In the annex you can see examples of different kinds of reportings.

## Validity and Reliability of the Tool

In this section, statistics of the validity and reliability of the tool is presented.

### Reliability: internal consistency

*Summary: the internal consistency is a requirement for the validation of a scale. The presupposition of this measurement is to check if the items of one scale share an high percentage of variance. If the items measures the same thing they should be correlated each other.*

As a validation mean we calculated the Cronbach's Alpha for all scales which measures the internal consistency. The minimum requirement for a consistent scale is set at .70.

Name of the Scale	Cronbach's Alpha
Archiving	0,906
Computer	0,939
Cooking	0,930
Dance	0,903
Gardening	0,880
Poetry/Literature	0,929
Music	0,859
Photography	0,912
Sculpture/Manufacturing	0,855
Sewing	0,887
Social Abilities	0,909
Technical Skills	0,897
Theater	0,903
Drawings	0,885
Sports	0,888
Satisfaction with life	0,851

All scales has a satisfactory level of internal consistency ranging from 0.85 to 0.94. The results have been applied on a wide range of forms of disability, the data demonstrate the opportunity to apply this tool in different conditions.

## Internal validity

Summary: the internal validity is the set of correlation among variables measured inside the tool. Basic hypothesis of validity are tested. The statistical indicator used to this purpose is called Pearson's correlation index ( $r$ ). Similar concept or theoretically interconnected concept should correlate positively and significantly (positive  $r$ ). Opposite concepts should correlate negatively (negative  $r$ ).

A basic assumption of this tool is that ability and interested in a specific area are connected with the satisfaction for life. We want to encourage people with disability to increase their talent in one area order to make them happier and more satisfied for their life.

At preliminary stage, we measured correlation between 3 variables:

- Satisfaction with life scales: based on 3 items ranging from 1 to 5.
- General Ability: is the sum of all ability items
- General Interest: is the sum of all interest items

The hypothesis of correlation between ability, interest and satisfaction is validated through internal positive and significant correlations.

	Satisfaction for life	General Ability	General Interest
Satisfaction for life	1	.410***	.347***
General Ability		1	.823***
General Interest			1

\*\*  $p < .001$

## Item analysis

Summary: the item analysis is the set of statistics applied to single items in order to check their specific validity.

Considering that the tool has the goal to measure abilities in a broad range of disability types, it is very important to do an in-depth analysis on all the scales.

The different types of disabilities analyzed differs significantly in terms of severity. We tested the validity of the test among all types considered.

One important topic is the index of difficulty.

The index of difficulty is the rate of correct answers given by a population. Despite the common definition of "index of difficulty" you should consider that the higher is the number, the easier is the item.

As a general rule an ability item should be too easy or too difficult.

The goal of a psychometrics test is to discriminate subject. A very difficult or easy tool don't do this, because all subjects give correct (too easy) or wrong (too difficult) answers.

The first activity we performed is to check the average results per ability scale on the general population analyzed. In the interpretation of these indicators, it is important to consider that each ability scales has 10 item with the following coding (YES = 1; NO = 0). The range of results for the ability items is from 0 to 10. The satisfaction with life scales is based on 3 items from 1 to 5. The range of results is from 3 to 15.

In the following table we have the results per ability scale

Scale	Mean	Standard Deviation
Sports	5,20	3,46
Drawings	5,49	3,25
Photography	4,19	3,63
Gardening	4,27	3,32
Archiving	4,64	3,57
Theater	4,66	3,52
Music	4,19	3,12
Dance	4,45	3,56
Technical	3,14	3,25
Literature	2,82	3,41
Sculpture	4,54	3,06
Cooking	3,67	3,72
Social Abilities	5,02	3,73
Computer	2,90	3,55
Sewing	4,08	3,16
Satisfaction	10,84	3,21

As it is possible to notice the majority of mean results are near to 5 which is the central point of the scale. This means that mostly items are not too easy and allow a proper evaluation at general level.

Some scales are considered to be more difficult, especially: technical abilities, literature, cooking, and computer.

At general level it is better to have a slightly difficult test than a very easy one, because the goal is to identify talents. If the average of subjects is 9 and the maximum point achievable would be 10, it would be difficult to state that 10 is a talent, comparing an average equal to 9. If the average on the sample is 3, it would be available up to 7 points of difference from the average, which would allow experts to be much clearer in the identification of a talent in one area.

- The probability to have a correct answer is measured through the index of difficulty. The probability is represented from 0 to 1 (ie, 0,29 is equal to 29%)
- The items are numbered in the order of presentation (ie ARA8 is the eighth item of the scale archiving)
- The items are listed from the most difficult to the easier

### Archiving

	Index of difficulty
ARA8	0,29
ARA7	0,32
ARA10	0,36
ARA9	0,39
ARA1	0,47
ARA6	0,48
ARA3	0,48
ARA2	0,56
ARA5	0,64
ARA4	0,66

### Computer

	Index of difficulty
COA10	0,16
COA9	0,16
COA5	0,18
COA4	0,25
COA2	0,28
COA8	0,30
COA3	0,33
COA7	0,37
COA6	0,39
COA1	0,49

### Cooking

	Index of difficulty
CUA7	0,22
CUA5	0,26
CUA2	0,34
CUA9	0,35
CUA8	0,36
CUA1	0,38
CUA10	0,40
CUA6	0,44
CUA3	0,44
CUA4	0,49

**Dance**

	Index of difficulty
BAA5	0,32
BAA9	0,35
BAA8	0,37
BAA7	0,37
BAA1	0,44
BAA2	0,45
BAA4	0,46
BAA10	0,50
BAA6	0,58
BAA3	0,62

**Drawings**

	Index of difficulty
DIA10	0,30
DIA8	0,31
DIA7	0,36
DIA9	0,39
DIA4	0,56
DIA3	0,65
DIA5	0,68
DIA6	0,70
DIA2	0,74
DIA1	0,79

**Gardening**

	Index of Difficulty
GIA3	0,22
GIA8	0,34
GIA9	0,36
GIA4	0,38
GIA2	0,42
GIA6	0,42
GIA7	0,45
GIA10	0,45
GIA5	0,48

**Poetry/Literature**

	Index of difficulty
POA4	0,17
POA7	0,21
POA8	0,21
POA10	0,22
POA9	0,23
POA2	0,23
POA3	0,27
POA5	0,37
POA1	0,44
POA6	0,49

**Music**

	Index of difficulty
MUA9	0,10
MUA8	0,22
MUA5	0,38
MUA4	0,39
MUA7	0,40
MUA1	0,48
MUA10	0,51
MUA3	0,53
MUA6	0,57
MUA2	0,62

**Photo**

	Index of difficulty
FOA7	0,31
FOA8	0,34
FOA1	0,34
FOA6	0,35
FOA2	0,38
FOA3	0,41
FOA5	0,46
FOA10	0,49
FOA9	0,52
FOA4	0,58

**Sculpture/Handicraft**

	Index of difficulty
SCA6	0,25
SCA8	0,27
SCA9	0,27
SCA10	0,29
SCA7	0,36
SCA5	0,51
SCA3	0,58
SCA1	0,63
SCA4	0,68
SCA2	0,72

**Sewing**

	Index of difficulty
SEA9	0,13
SEA8	0,22
SEA6	0,30
SEA7	0,31
SEA2	0,34
SEA10	0,34
SEA3	0,35
SEA5	0,67
SEA4	0,69
SEA1	0,73

**Social abilities**

	Index of difficulty
ASA4	0,35
ASA6	0,39
ASA5	0,46
ASA9	0,46
ASA2	0,49
ASA10	0,50
ASA3	0,55
ASA8	0,57
ASA1	0,57
ASA7	0,58

**Sports**

	Index of difficulty
SPA9	0,33
SPA3	0,42
SPA7	0,44
SPA5	0,49
SPA2	0,54
SPA10	0,55
SPA1	0,58
SPA6	0,61
SPA4	0,61
SPA8	0,63

## Theater

	Index of difficulty
TEA10	0,29
TEA7	0,33
TEA2	0,37
TEA9	0,40
TEA5	0,44
TEA6	0,49
TEA1	0,49
TEA8	0,50
TEA4	0,63
TEA3	0,72

## Technical Abilities

	Index of difficulty
ATA6	0,15
ATA3	0,19
ATA4	0,25
ATA1	0,26
ATA2	0,30
ATA5	0,32
ATA10	0,34
ATA9	0,39
ATA8	0,42
ATA7	0,54

STANDARDIZATION AUTISM

		Sports	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance
N	Valid	54	54	54	54	54	54	54	54
	Non-valid	0	0	0	0	0	0	0	0
Median		5,15	3,93	2,04	2,20	2,89	2,44	2,44	3,69
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	10	10	9	10	10	10
Percentile	25	2,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	50	5,00	4,00	0,50	1,50	2,00	1,00	2,00	3,00
	75	8,00	7,00	4,00	3,25	5,00	4,00	3,25	6,25

		Technical Abilities	Literature	Handicraft	Cooking	Social Abilities	Computer	Sewing	Life Satisfaction
N	Valid	54	54	54	54	54	54	54	54
	Non-valid	0	0	0	0	0	0	0	0
Median		1,91	0,56	3,78	1,20	1,72	1,43	2,39	9,39
Minimum		0	0	0	0	0	0	0	0
Maximum		10	7	10	10	10	10	8	15
Percentile	25	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,75
	50	1,00	0,00	3,50	0,00	0,00	0,00	2,00	9,00
	75	3,00	1,00	6,25	1,25	3,25	1,25	4,00	12,00

STANDARDIZATION MENTAL

		Sports	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance
N	Valid	236	236	236	236	236	236	236	236
	Non-valid	0	0	0	0	0	0	0	0
Median		5,87	5,75	3,70	4,24	4,11	4,26	3,91	4,85
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	10	10	10	10	10	10
Percentile	25	3,00	4,00	1,00	2,00	1,00	1,25	1,00	2,00
	50	6,00	6,00	3,00	4,00	4,00	4,00	3,00	5,00
	75	9,00	8,00	6,00	7,00	7,00	7,00	7,00	8,00

		Technical Abilities	Literature	Handicraft	Cooking	Social Abilities	Computer	Sewing	Life Satisfaction
N	Valid	236	236	236	236	236	236	236	236
	Non-valid	0	0	0	0	0	0	0	0
Median		2,40	1,78	5,29	2,91	4,19	2,11	3,82	10,62
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	10	10	10	10	10	15
Percentile	25	0,00	0,00	4,00	0,00	1,00	0,00	2,00	9,00
	50	1,00	1,00	5,00	2,00	4,00	1,00	3,00	11,00
	75	3,00	2,75	7,00	6,00	7,00	3,00	6,00	13,00

STANDARDIZATION PHYSICAL-MENTAL

		Sports	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance
N	Valid	63	63	63	63	63	63	63	63
	Non-valid	0	0	0	0	0	0	0	0
Median		2,08	3,76	1,95	1,98	2,14	2,41	2,27	1,90
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	9	10	10	10	10	10
Percentile	25	0,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00
	50	1,00	3,00	0,00	1,00	0,00	1,00	2,00	0,00
	75	3,00	6,00	4,00	3,00	4,00	4,00	4,00	4,00

		Technical Abilities	Literature	Handicraft	Cooking	Social Abilities	Computer	Sewing	Life Satisfaction
N	Valid	63	63	63	63	63	63	63	63
	Non-valid	0	0	0	0	0	0	0	0
Median		0,90	0,84	2,13	1,38	2,98	1,00	1,73	9,81
Minimum		0	0	0	0	0	0	0	3
Maximum		10	8	10	10	10	9	6	15
Percentile	25	0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,00
	50	0,00	0,00	1,00	0,00	1,00	0,00	1,00	10,00
	75	1,00	1,00	3,00	1,00	5,00	2,00	3,00	13,00

STANDARDIZATION PHYSICAL

		Sports	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance
N	Valid	164	164	164	164	164	164	164	164
	Non-valid	0	0	0	0	0	0	0	0
Median		5,30	6,46	5,84	5,73	6,46	6,30	5,39	4,46
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	10	10	10	10	10	10
Percentile	25	3,00	5,00	3,00	3,00	5,00	5,00	4,00	2,00
	50	6,00	7,00	6,50	6,00	7,00	7,00	6,00	4,00
	75	8,00	10,00	9,00	9,00	10,00	9,00	7,00	7,00

		Technical Abilities	Literature	Handicraft	Cooking	Social Abilities	Computer	Sewing	Life Satisfaction
N	Valid	164	164	164	164	164	164	164	164
	Non-valid	0	0	0	0	0	0	0	0
Median		4,75	4,86	4,70	5,43	7,48	5,06	5,61	12,28
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	10	10	10	10	10	15
Percentile	25	2,00	2,00	2,00	2,00	6,00	0,25	3,00	11,00
	50	5,00	4,00	4,50	6,50	9,00	6,00	6,00	13,00
	75	8,00	8,00	7,00	9,00	10,00	9,00	8,00	14,00

STANDARDIZATION PSYHIATRIC

		Sports	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance
N	Valid	18	18	18	18	18	18	18	18
	Non-valid	0	0	0	0	0	0	0	0
Median		6,00	5,89	6,22	4,11	5,83	6,17	5,17	5,39
Minimum		0	0	0	0	0	1	0	0
Maximum		10	10	10	10	10	10	10	10
Percentile	25	3,00	4,00	3,75	0,75	3,00	2,75	2,75	1,75
	50	7,00	5,50	6,00	3,50	6,50	6,50	5,50	5,00
	75	9,25	9,25	9,00	7,50	9,25	10,00	8,00	9,00

		Technical Abilities	Literature	Handicraft	Cooking	Social Abilities	Computer	Sewing	Life Satisfaction
N	Valid	18	18	18	18	18	18	18	18
	Non-valid	0	0	0	0	0	0	0	0
Median		6,06	7,11	5,33	7,56	6,72	4,61	3,89	8,39
Minimum		0	0	0	0	1	0	0	3
Maximum		10	10	10	10	10	10	10	15
Percentile	25	1,75	4,75	2,75	5,00	3,75	0,00	1,75	5,75
	50	8,00	9,00	5,00	10,00	7,50	3,00	4,00	9,00
	75	9,25	10,00	8,00	10,00	10,00	10,00	5,25	9,75

## Test-retest procedure

The rationale of this project is that the identification of a talent and the participation to dedicated courses increase the satisfaction for life and abilities of people with disability.

To demonstrate this, we introduced a test-retest procedure among a subsample of 123 subjects.

The experimental designed can be summarized as follows.

- a) The participants with disability complete the full assessment tool, including all scales
- b) The participants do a course in one area explored by the tool
- c) The participants measure only the scale in the dedicated area and satisfaction for life scale

At the end of the procedure we produce a data matrix including the following variables

- Gender
- Type of disability
- Name of the ability analyzed
- Ability before the course (pre-test)
- Ability after the course (post-test)
- Satisfaction for life before the course (pre-test)
- Satisfaction for life after the course (post-test)

In order to determine differences among the same subjects before and after the course we performed paired t-test statistics. This techniques allow to compare means of the same subjects before and after a specific event, stimulus, experimental procedure (ie the course).

The t-test statistics demonstrated that participants increased their ability and satisfaction for life significantly

	Pre-test mean	Post-test mean	t	P
Ability	6,64	8,53	-9,27	<0,001
Satisfaction with life	10,55	12,52	-11,598	<0,001

As we can see from the previous table, the improvements in both scales is approximately 2 points in both scales.

The evaluation of this positive effects are measured through the effect size Cohen's d formula.

This formula allow to quantify the improvement during an experimental procedure. Here the results, which can be defined as large effect size, according to Cohen

Variable	Cohen's d
Ability	0,82
Satisfaction with life	0,80

In the analysis of these results we should consider that the improvement of abilities and satisfaction with life are related to the activities performed within pre-test and post-test.

## The course activities

The tool by itself is only able to measure ability, identify talents and satisfaction but cannot improve this results.

The improvement is related to activities performed. To reach this goal, having a course of good quality is not enough, you should consider also its appropriateness to the target groups, familiarity of trainers with the target groups and other aspects. For the clarity and completeness of information, we describe here the activities performed in this study.

The partners of this study applied test-retest procedures in a sample participating to courses related to the following abilities: Sports, Cooking, Handicraft, Gardening, Dance, Music, Drawings, Photo, Archiving, Social Skills, Computer.

In other words the test retest procedure do not cover all abilities measured, and considering that the total sample is 123, and the ability measured are 11 out of 15, not all abilities are clearly represented on this experiment.

Also the types of disability are not all covered, having a majority of subjects with mental or physical disability, few data are collected for subjects with autism or physical+mental disability.

However, the improvement of abilities is clearly related to activities performed, which can be summarized as follows:

- **Cooking:** The adults have learned the basic rules of cooking, boiling and scrambling an egg, cooking omelet, spaghetti, meat, chicken, rice, potatoes, soup, cakes and vegetables. They have learned simple recipes, the ingredients of the meals, and time that is needed to cook.
- **Computer:** The adults have learned the basic rules basic rules of computers, focusing mainly on word and internet. Specifically they learned how to turn on and turn off the computer; how to create a document in WORD, save it and archive it; how to use commands such as copy paste etc; how to formulate a WORD document using bold, italics etc; how to create an e mail account and how to read the inbox; how to send e mails; how to attach files in mails; how to create an account in social media and how to use their accounts. For the better assimilation, exercises were given to students
- **Sports:** The training was done mainly in a playful form while all the elements of the gym were introduced taking into account the level and the age of the attendees. Ground exercises, horse, multi-weight, balance beam, rings, jumping rod, drop mattresses, small trampoline but also ball, wreath, ribbon, pins, rope are some of the instruments that were used.
- **Painting/Drawing:** The adults learned about-the term of symmetry, the importance of balance and harmony, the impact of light in painting, the tonal contrasts, the range from the darkest to the most open areas, the range of tonalities, basic guidelines of how to paint.
- **Dance:** The adults learned traditional dances of their country (Greece and Turkey). The adults in Greece learned kalamatianos, tsamikos, syrtos, palamakia, karagouna, tik, syrtos sta tria and the adults in Turkey learned kafkas dansları, roman havası and zeybek. The dance is presented by the teacher and it is divided and presented in parts. Difficult and complex dance moves were analyzed to be understood by the trainees.
- **Handicraft:** The adults made necklaces and wristlets from the strings, made basic weaving, prepared pictures using paints and stones, made products with ceramic and painted them.
- **Sewing:** They learned straight stitch via lockstitch machine, making a mould, ironing and basic sewing with hands
- **Gardening:** The adults learned to prepare the soil, planting vegetables, hoeing and watering.
- **Music:** They learned to play guitar at a basic level, they received voice training and sang songs.

- **Photo:** The adults learned to prepare the photography devices, taking photos at a basic level, arranging the light, and they prepared a photo exhibition.
- **Archiving:** They have learned to order and organize things and do tasks in sequence.
- **Social Skills:** The adults have done charity work like visiting old age homes and youth hostels.

## **Limits of the tool**

In this section, the limitations of the tool is presented.

### *Sample Characteristics*

Although the sample size is high (n = 690), it does not represent all the possible forms of disabilities. The groups are analyzed on groups big enough to perform statistics, but still heterogenous (mental, physical, mental and physical, autism, psychiatric disabilities).

A possible extension of the validation of this tool can consider more specific forms of disability (ie considering the severity of autism, specific syndroms not included in the sample etc.)

### *Talents*

The talents assessed within this tool are limited with sports, drawings, photography, gardening, archiving, theater, music, dance, technical, literature, sculpture/handicraft, cooking, social abilities, computer and sewing.

The scale has a limit of 10 items. The number of items do not cover all possible graduality in the performance related to an ability. The introduction of longer scale (ie 20 items) however can affect the time needed for administration and the effort for all the participants.

An idea for the future of the tool can be the production of an advanced tool with more difficult items, more adapt for the implementation of advanced courses.

## **For contributors**

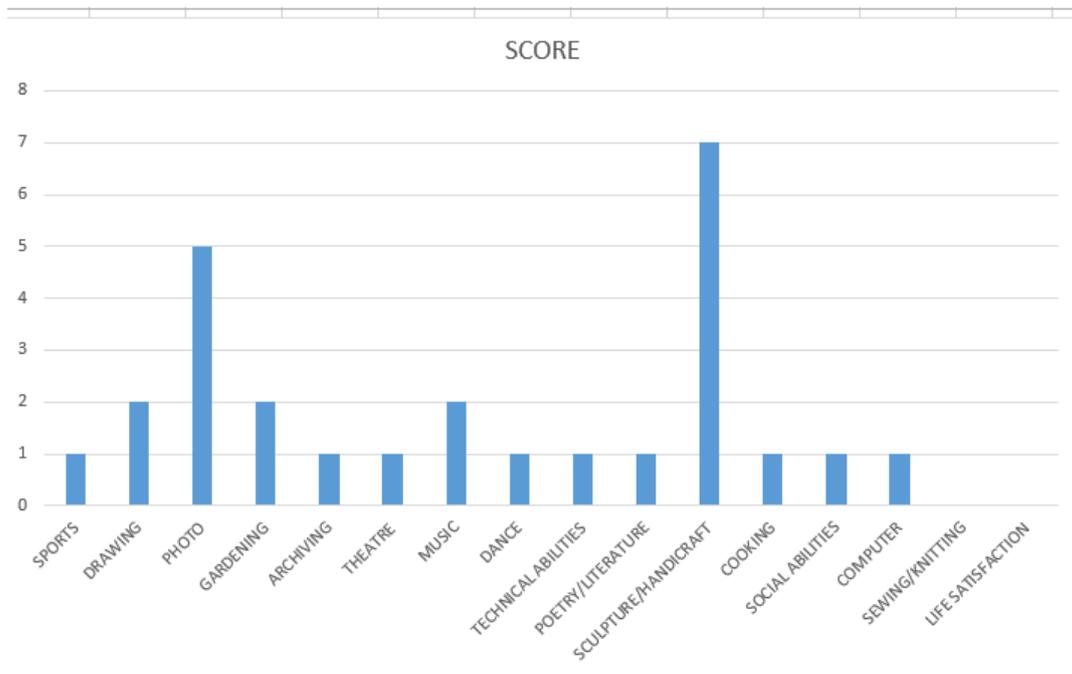
If you want to translate The Disabled Adults' Talent and Interest Identification Tool into your language or validate the tool within a specific form of disability, you can receive a free consultancy from us. You can contact us via [hhtramrehberlikbolumu@gmail.com](mailto:hhtramrehberlikbolumu@gmail.com)

## ANNEX 1

An example for Crystalized Talents

Disability type of the adult: autism

The scores of the adult is presented below:



For the evaluation we look at the standardization table of autism because the adult is autistic. The results of the adult is presented below:

		Sport	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance
N	Valid	54	54	54	54	54	54	54	54
	Non valid	0	0	0	0	0	0	0	0
Median		5,15	3,93	2,04	2,20	2,89	2,44	2,44	3,69
Minimum		0	0	0	0	0	0	0	0
Maximum		10	10	10	10	9	10	10	10
Percentile	25	2,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
	50	5,00	4,00	0,50	1,50	2,00	1,00	2,00	3,00
	75	8,00	7,00	4,00	3,25	5,00	4,00	3,25	6,25
		NO	NO	TALENT	NO	NO	NO	NO	NO

Technical	Literature	Handicraft	Cooking	Social	Computer	Sewing	Life Satisfaction
54	54	54	54	54	54	54	54
0	0	0	0	0	0	0	0
1,91	0,56	3,78	1,20	1,72	1,43	2,39	9,39
0	0	0	0	0	0	0	0
10	7	10	10	10	10	8	15
0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,75
1,00	0,00	3,50	0,00	0,00	0,00	2,00	9,00
3,00	1,00	6,25	1,25	3,25	1,25	4,00	12,00
NO	NO	TALENT	NO	NO	NO	NO	

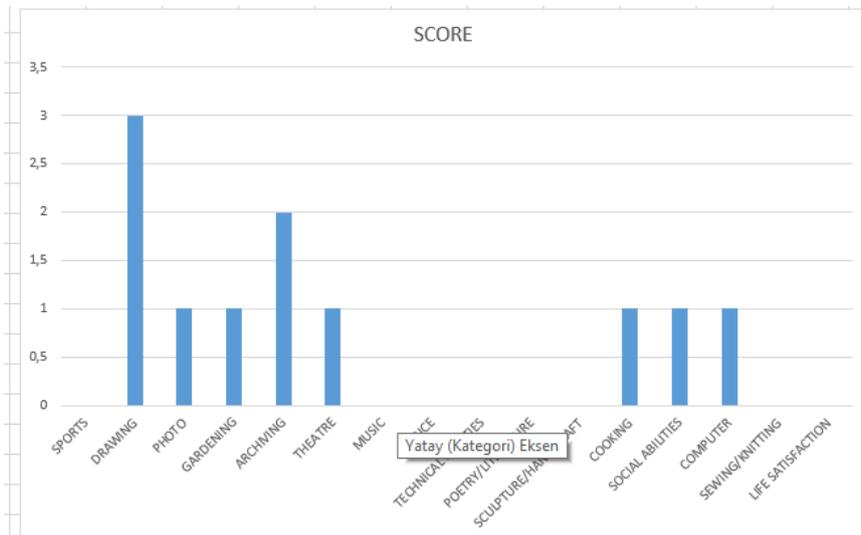
When we look at the results of the adult we can see that s/he has talents in photography and handicraft. So we can offer courses of photography and handicraft.

**ANNEX 2**

An example for no talent situation:

Disability type of the adult: physical + mental

The scores of the adult is presented below:



For the evaluation we look at the standardization table of physical + mental because the adult is physically and mentally disabled. The results of the adult is presented below:

		Standardization Physical-Mental									
		Sports	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance		
N	Valid	63	63	63	63	63	63	63	63		
	Non-valid	0	0	0	0	0	0	0	0		
Median		2,08	3,76	1,95	1,98	2,14	2,41	2,27	1,90		
Minimum		0	0	0	0	0	0	0	0		
Maximum		10	10	9	10	10	10	10	10		
Percentile	25	0,00	1,00	0,00	0,00	0,00	0,00	0,00	0,00		
	50	1,00	3,00	0,00	1,00	0,00	1,00	2,00	0,00		
	75	3,00	6,00	4,00	3,00	4,00	4,00	4,00	4,00		
		NO	NO	NO	NO	NO	NO	NO	NO	I	

Technical Abilities	Literature	Handicraft	Cooking	Social Abilities	Computer	Sewing	Life Satisfaction
63	63	63	63	63	63	63	63
0	0	0	0	0	0	0	0
0,90	0,84	2,13	1,38	2,98	1,00	1,73	9,81
0	0	0	0	0	0	0	3
10	8	10	10	10	9	6	15
0,00	0,00	0,00	0,00	0,00	0,00	0,00	7,00
0,00	0,00	1,00	0,00	1,00	0,00	1,00	10,00
1,00	1,00	3,00	1,00	5,00	2,00	3,00	13,00
NO	NO	NO	NO	NO	NO	NO	NO

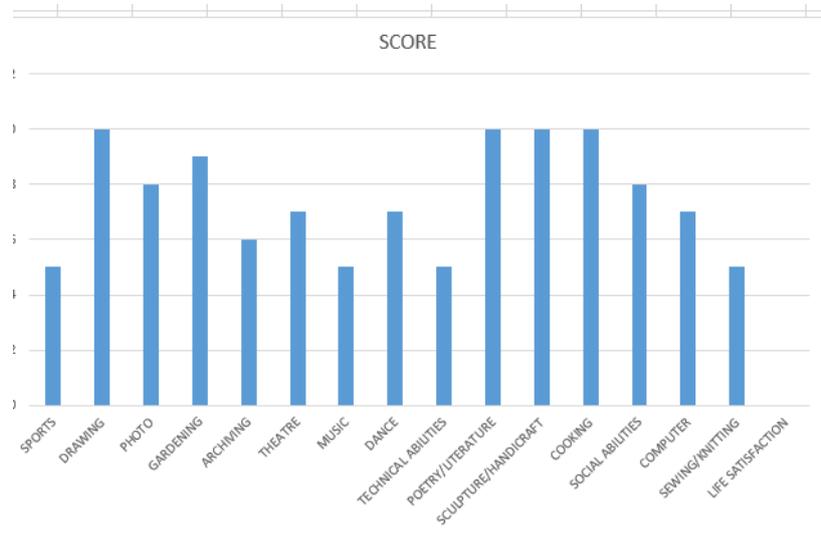
When we look at the results of the adult, the standardization table tell us that the adult has no talent. However we should tell the adult his or her talent area and offer a course. So we can offer photography course from which s/he has the highest score.

### ANNEX 3

An example for many talents situation:

Disability type of the adult: mental

The scores of the adult is presented below:



For the evaluation we look at the standardization table of mental because the adult is mentally disabled.

The results of the adult is presented below:

		Standardization Mental									
		Sport	Drawing	Photo	Gardening	Archiving	Theatre	Music	Dance		
N	Valid	236	236	236	236	236	236	236	236		
	Non valid	0	0	0	0	0	0	0	0		
Median		5,87	5,75	3,70	4,24	4,11	4,26	3,91	4,85		
Minimum		0	0	0	0	0	0	0	0		
Maximum		10	10	10	10	10	10	10	10		
Percentile	25	3,00	4,00	1,00	2,00	1,00	1,25	1,00	2,00		
	50	6,00	6,00	3,00	4,00	4,00	4,00	3,00	5,00		
	75	9,00	8,00	6,00	7,00	7,00	7,00	7,00	8,00		
		NO	TALENT	TALENT	TALENT	NO	NO	NO	NO		

	Technical	Literature	Handicraft	Cooking	Social	Computer	Sewing	Life Satisfaction
N	236	236	236	236	236	236	236	236
Valid	0	0	0	0	0	0	0	0
Median	2,40	1,78	5,29	2,91	4,19	2,11	3,82	10,62
Minimum	0	0	0	0	0	0	0	0
Maximum	10	10	10	10	10	10	10	15
Percentile 25	0,00	0,00	4,00	0,00	1,00	0,00	2,00	9,00
Percentile 50	1,00	1,00	5,00	2,00	4,00	1,00	3,00	11,00
Percentile 75	3,00	2,75	7,00	6,00	7,00	3,00	6,00	13,00
	TALENT	TALENT	TALENT	TALENT	TALENT	TALENT	NO	NO

When we look at the results of the adult, the standardization table tell us that the adult has talents in drawing, photography, gardening, technical, literature, handicraft, cooking, social and computer. However if we tell the adult his or her talent areas they will be confused with the result. So we can provide guidance to the adult to crystalize their talent and interest areas.

**ANNEX 4**

An example of an evaluation form

Dear ..... (Name and surname of the adult)

Within the scope of our institution, an assessment tool to discover your interests and talents have been applied. According to the results of this tool, your interest and talent areas are:

.....  
.....  
.....  
.....

Adult education courses and vocational training courses are opened in these areas. It will be beneficial for you if you attend courses in your interest and talent areas. To get information about the courses you may attend, you can visit us in our institution or you can contact us via our telephone number or email.

***Address:***

***Telephone number:***

***email:***

Name of Your Institution