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Research for Grit Levels of Prospective Teachers in terms of Some Variables

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Research for Grit Levels of Prospective Teachers in Terms of Some Variables

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Abstract

The meaning of the grit in TDK is determination of defeating obstacles in a job. While Duckworth, Peterson, Matthews, and Kelly (2007) clarified the grit, they said “the grit is determination on longtime goals and desire level”. And the also emphasized the grit’s importance in success and intelligence measurement. Even Duckworth and Quinn (2009) defended that the grit as explanatory of academic success is more effective than intelligence grade. There are studies defending the grit’s relation with self-arrangement, self-discipline and goal tendency and the grit’s importance in explaining these concepts (Duckworth & Quinn, 2009; Peterson & Seligman, 2004). In this research the relation between prospective teachers’ successes and grits are examined according to gender and age factors. In this research descriptive survey model was used aiming to put forward the relation between success and grit. In 2015-2016 Education Year Spring Term in NEU Education Faculty 270 last class students in different departments participated in this research. As a tool to collect data, the Grit Scale developed by Duckworth and Quinn and adapted to Turkish by Sariçam et al. (2015) was used. In this research frequency, mean, standard deviation and nonparametric statistic techniques were used to analyze the data. Mann-Whitney-U and Kruskal-Wallis tests are applied to determine whether there was a meaningful difference among the opinions of the students according to gender and success factors. The data gathered as a result of measurements during research was done in computer by SPSS software. It is seen that the grit point means of Education faculty last class students are in intermediate level, the girls’, the 25+ ages’ and the German department students’ grit point means are higher than other groups’ grit point means. When looked at the difference between the experimental and the control groups, it was seen that the students in the experimental group had more achievement scores compared to the students in the control group. The experimental method adopted created significance in favor of the experimental group.

Introduction

The meaning of the grit is given in TDK dictionary as determination of defeating obstacles in a job. The grit the top of the personal features recently refocused on is thought as a concept explaining defeat determination and effective leadership. Additionally, Peterson and Seligman (2004) determined the grit’s importance and defended that the grit as explanatory of academic success is more effective than intelligence grade. There are studies defending the grit’s relation with n success and intelligence measurements and emphasized the grit’s affection on success. Moreover Duckworth and Quinn (2009) defended that the grit as explanatory of academic success is more effective than intelligence grade. There are studies defending the grit’s relation with self-arrangement, self-discipline and goal tendency and the grit’s importance in explaining these concepts (Duckworth & Quinn, 2009; Peterson & Seligman, 2004). In these researches the grit means that whatever happens, the goal activity is continued. Also, Duckworth, Peterson, Matthews, and Kelly (2007) defined the grit as continuity in attitudes and determination for longtime goals. Even is a person faces to troubles and stressful situations, this resistance carries on as a personal power and an effort puts forward to reach goals (Singh & Jha, 2008). Despite difficulties and unwanted judgments, the grit goes on as a continual energy. The person with high grit never feels tired and has a tendency to struggle with situations given up by others. Determined people can behave more flexible and tolerant and also they can deal with problems with analytical view (Wilis, 2008). The grit seen as a necessary feature to pass over difficulties is defined also as a continual effort against complex missions (Ayres, Cooley, & Dunn, 1990; Rudkin, 2003). When we examine the studies in literature, it is seen that there is a relation between the grit and the academic success (Dubey, 1982, Duckworth et al., 2007; Duckworth & Quinn, 2009, Beyhan &

Sünbül, 2005). For example, when we look a student to see relation between the grit and academic success, it is found that the students with higher grit are more successful in their academic life than the students with lower grit (Dubey, 1982). When students want to specialize in a new knowledge area or develop new problem solving strategy, they face to short term difficulties or their courage are broken. Despite these difficulties and broken courage, the undetermined people usually become unsuccessful (Ayres et al., 1990; Torgesen & Licht, 1983). When we look similar studies, it is seen that there is a relation between the grit and academic difficulty. The people getting the success in their tasks catch the others' eyes because of their patient characteristic (Duckworth et al., 2007). Henry and Smith made a conclusion that the people successful in their life are more determined than unsuccessful ones and the environmental factors have a important effect on decisions about the grit. Akin and Arslan (2014) also tried to put forward the relation between success tendency and determination. Therefore, it is found important to examine the grit levels and the success grades relation of last class students in different departments of NEU Education Faculty and to identify meaningful differences according to their gender, ages, department types. For this purpose, a problem sentence came out; "Which is the level of last class students' grit levels in Education faculty? ". And also sub-problem sentences were tried to answer:

- 1-What is the level of last class students' grit points in Education faculty?
- 2-Is there meaningful difference among the grit point means of last class students in Education faculty according to gender factor?
- 3-Is there meaningful difference among the grit point averages of students in Education faculty according to age factor?
- 4-Is there meaningful difference among the grit point means of students in Education faculty according to department factor?

Method

This study is trying to define the effect of the grit on last class students' success. In this research the descriptive method was used to fix the situation exactly and general survey model one of the survey models was used in this research. The survey models are research approaches aiming to depict a situation exactly it is (Sönmez & Alacapınar, 2011). Also the grit points of students were compared according to gender, age and department factors. Therefore this research is also a relational research.

Population and Sample

The population of this research consists of different department last class students in NEU Education Faculty in spring term of 2015-2016 academic year. Because it is impossible to reach the whole population, sample choosing method was used and the sample was taken by students with disproportionate sample. 270 students participated in this sample, because 31's of 301 students did not fill the scale exactly.

Data Collection Tool

In this research, "Grit-S" scale of Duckworth & Quin (2009), it was adapted to Turkish by Sariçam and the others' (2011), was used because of better reliability score. This scale consists of 8 items. And it has two dimension, these are: "the consistency of interest" (four items, as an example: I often make a goal for myself , but then I prefer to run after another one.), and "The perseverance of effort " (four items, as an example: Whatever job I started , I do my best to finish). It has been graded as five-point Likert type and these points are as follows: The Short Grit Scale form is a five point Likert type scale (1-definitely disagree, 2-disagree, 3-decisive, 4-agree, 5-definitely agree). In linguistic equivalence study of the scale, the correlation coefficient between Turkish and English forms were determined as 89 ($p=00$). As a result of explanatory factor analysis the KMO sample coefficient was determined as 83, and as a result of Bartlett Sphericity test was determined as $\chi^2=503,877$ ($p<.001$, $sd=24$). The result of verifying factor analysis consisted of 8 items, 2 dimensions ($\chi^2/sd=2.06$, $RMSEA= .046$, $CFI=.95$, $GFI=.94$, $AGFI=.93$, $SRMR=.047$) and factor loads of items were seen between 42 and 77. The coefficient of repetition and reliability of test was 69 and coefficient of corrected total item correlation was between 33 and 65. After the scale, the data were analyzed by Wing degree scale. The scale has five options. The interval coefficient for four intervals in fivefold scale were (4/5) 0,80, these are; I definitely don't agree (1-1,79), I don't agree (1,80-2,59), I am in decisive (2,60-3,39), I agree (3,40-4,19), I definitely agree (4.20- 5).

The Analysis of the Data

In this research frequency, mean, standard deviation and nonparametric statistic techniques were used to analyze data. The data gathered as a result of measurements during research was done in computer by SPSS software. Mann-Whitney-U and Kruskal-Wallis tests are applied to determine whether there was a meaningful difference among the opinions of the students according to gender and success factors.

Findings

The First Sub-question

The first sub-question sentence is "What is the level of last class students' grit points in Education faculty?". In Table 1, the Standard deviation values and the arithmetic averages of students' grit points are given;

Table: 1. The descriptive statistical data about students' grit points

Items	n	M	SD
1. New ideas and new projects confuse my mind about old ones	270	2.91	1.04
2. Difficulties can never daunt me.	270	3.85	0.96
3. For short time, I concern about	270	2.65	1.22
4. I am hardworking	270	3.42	0.99
5. I often make a goal for myself , but then I prefer to run after another one.	270	2.49	1.28
6. I have difficulties about focusing on long time Project to complete	270	2.81	1.30
7. Whatever job I started , I do my best to finish	270	4.13	0.97
8. I am persevering and skillful	270	3.89	0.98
Total	270	3.27	0.41

Students showed highest participation on the question 7 with 4,13 arithmetic mean and lowest participation on the question 5 with 2.49 arithmetic mean. When we examine the mean of total grit points, it is seen that 3,27 mean point is obtained. The opinions of students generally came together on option "I'm decisive" (2.60-3.39) . Students did not display a determined attitude.

The Second Sub-question

The second sub-question is "Is there meaningful difference among the grit point means of last class students in Education faculty according to gender factor?" For this sub-question, H1 hypothesis is formulated as: "There is a meaningful difference between girl and boy students' grit points in education faculty. The data of total grit points result of Mann-Whitney U test are given in Table 2. According to gender factor, although there is a difference in girls' favor among the Education faculty last class students' grit point means, this difference is not meaningful.

Table 2. According to gender factor, The Mann-Whitney U test results of education faculty last class students' grit points

Gender	n	Mean Rank	Sum of Ranks	Mann-Whitney U	p
Girl	178	138.62	24673.50	7.634	.359
Boy	92	129.47	11911.50		

The Third Sub-question

The third sub-question is "Is there meaningful difference among the grit point means of students in Education faculty according to age factor?". For this sub-question, H1 hypothesis formulas: "There is a meaningful difference among Education faculty last class students' grit point means." The data of total grit points result of Kruskal Wallis test are given in Table 3. According to age factor, although there is a difference in over 25 ages' favor among education faculty last class students' grit point means, this difference is not meaningful.

Table 3. According to age factor. Kruskal Wallis H-test results of education faculty last class students' grit points

The number of students	n	Mean Rank	sd	Chi-Square	p	Mean Difference
-20 ages	66	139.13	2	1.455	.483	-
Between 20-25	194	132.94				
25+ ages	10	161.25				

The Forth Sub-question

The forth sub-question is "Is there meaningful difference among the grit point means of students in Education faculty according to department factor?" For this sub-question. H1 hypothesis formulated: "According to department factor. There is a meaningful difference among Education faculty last class students' grit point means." The data of total grit points result of Kruskal Wallis H test are given in Table 4. According to department factor. there is difference among Education faculty last class student's grit point means. The grit point mean of German department students is highest. preschool department is lowest.

Table 4. According to department factor. Kruskal Wallis H-test results of Education faculty last class students' grit points

Department	n	Mean Rank	sd	Chi-Square	p	Mean Difference
Pre-Education	157	129.69	2	2.960	.228	-
Computer	69	138.17				
German	44	152.05				

Discussion and Conclusions

The opinions of students generally came together on option "I'm decisive" (2.60-3.39). Students did not display a determined attitude. When we look the data according to gender factor. it is seen that the grit point means of girls are higher than the boys' grit point means. This result cannot be evaluated as if girls are more determined. The results of this research are similar to some studies in literature (Dubey. 1982; Duckworth et al.. 2007; Duckworth & Quinn. 2009). But the differences in this study are not meaningful. It can be said that a mistake confused the data when gathering. When we look the data according to age factor. the students 25+ ages have the highest grit point mean; the students between 20-25 ages have the lowest grit point mean. Although there is a difference in the students 25+ ages' favor. this can't be evaluated as if the students 25+ ages are more determined than the students between 20-25 ages. Because the differences in our study are not meaningful. so that it can be said that a accidental mistake confused the data when gathering. According to department factor. it is seen that the grit point mean of German department students are higher in order than the computer department students' and the pre-school department students' grit point means. Although there is a difference in German students' favor. it can't be said that the German students are more determined than others. Because the differences in our study are not meaningful. thus it can be said that a mistake confused the data when gathering.

Recommendations

It is seen that the grit point means of Education faculty last class students are in intermediate level. the girls'. the 25+ ages' and the German department students' grit point means are higher than other groups' grit point means. According to these results. these suggestions can be given for practitioners and researchers:

- Reordering on standards of lesson programs to increase future teachers' grits.
- The Standard in reordering can be determined higher than present standards.
- The struggler areas can be made for increasing students' grits
- New researches can be made according to new factors.

Notes

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