Academic Motivation Levels of Teacher Candidates: Evidence From Chronotype And Cognitive Absorption

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ABSTRACT

Motivation is a key element in the realization of learning-teaching activities. An individual with a high level of motivation may have a more successful process while fulfilling the responsibilities (preparation for the exam, preparing a project, doing homework and reading homework etc.) throughout his / her academic life. In addition, it is very important to determine the teacher candidates who will work in the field of education at descriptive level when the variables such as cognitive confusion and being morning-evening are very much studied. The aim of the study is to investigate the relationship between academic motivation, morning-evening and cognitive grabbing. In this study, Academic Motivation Scale (AMS) were used. In this respect, data collection tools have been applied to 473 participants in total, including 106 students studying in Uludağ University and 367 students in teacher education programs. SPSS for Windows 20.0 program was used to analyze the data and appropriate statistical analyzes were used. The data obtained are discussed in the light of literature.

Keywords: Teacher Candidates, Cognitive grabbing, Academic motivation

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INTRODUCTION
Motivation is a basic factor in the activities of teaching and learning. The concept of motivation is used for more than one meanings. Whereas an exact and accurate definition cannot be made it can be stated as “motivation is the internal state that causes the human behaviours emerge and direct the behaviours” (Balaban Sah, 2006; Ertem, 2006).

The motivation can be physical or psychological and also some researchers evaluate the motivation in two dimensions; internal and external. According to Deci and Ryan (1985) internal motivation can result from the wishes and the desires that come out of the inner side of the individual; on the other hand the external motivation may result from positive or negative responsibilities that come from the outside world (cited from Demir and Ari 2013). The individual’s having a productive motivation experience is closely related to the motivation level and the researches carried out on this issue indicate that the motivation has an important and strong effect on academic outputs (Kuyper, Van der Werf and Lubbers, 2000; Wolters, 1999).

The individual whose level of being motivated is high, can experience a more successful process while he or she fulfils the responsibilities (preparing for the exam, designing a project, preparing homework and doing reading homework etc). According to Colengelo (1997) within the state of lack of academic motivation incompatible negative behaviours such as impatience, instability and not enjoying whatever the individual is doing, may emerge (cited. Demir and Ari 2013). Incompatible academic behaviours cause the problem that we call academic procrastination tendency in motivation. On the other hand, the individuals, who do not indicate procrastination behaviours, possess higher internal and external motivation levels and they do not have an idea of postponing their duties. Therefore, they may spend more time performing their tasks (Lee, 2005; Senecal, Julien and Guay, 2003). For this reason, the individuals, who possess high academic procrastination tendency levels, are motivated less regarding the activities they perform (Brownlow and Reasinger, 2000).

When the studies regarding the variables that affect academic motivation levels are examined it can be seen that Terzi, Ünal and Gürbüz (2011), investigated elementary school mathematics teachers’ academic motivation levels regarding mathematics in terms of gender, socio economic state and type of education.

Within this research the academic motivation levels of the teacher candidates are compared in terms of grade, department, type of education, the perception of academic success, morningness-eveningness (chronotype) and the time spent on the internet.

METHOD
The Model of the Research
This research was carried out based on the scanning model. The scanning models are approaches that aim to describe a past situation which still exists as the way it is. The event, the individual or the objects that are the subjects of an investigation are attempted to be described as they exist in their own conditions. No effort was made in order to change or affect them. Within the research the academic motivation levels of the teacher candidates, who study in various departments of the Education Faculty in Bursa Uludağ University, are attempted to be revealed the way they are with the help of a scale.

The Study Group
The study group of the research consists of 473 teacher candidates who study in Bursa Uludag University Education Faculty. The demographic features are presented in Table 1.
When Table 1 is examined it can be seen that 23.04% of the 473 teacher candidates study Psychological Counselling and Guidance, 78.2% of them are female, 19.4% of them take evening education. In addition, 42.28% of them use the internet 3-4 hours a day, 31.10% of them possess more eveningness, 34.03% of them possess more morningness.

**Data Gathering Tool**

Within the research in order to determine the academic motivation levels of the postgraduate students “Academic Motivation Scale”, which was formerly used by Bozanoğlu (2004) for validity and reliability study, was used. This assessment instrument is 5 Likert scale and it consists of “definitely not appropriate”, “not appropriate”, “indecisive”, “appropriate”, “definitely appropriate” options and also it is scored from 1 to 5. Only the 4th item is scored verse. The reliability coefficient of the scale was found $\alpha=.86$ and it was measured as $\alpha=.91$ within the present research. The highest score that can be taken...
from the scale is 100 and the lowest score is 20. The high scores taken from the Academic Motivation Scale mean that academic motivation is positive. As a result of the Cronbach Alfa test carried out in order to determine the reliability coefficients, it can be said that the reliability coefficient of the Academic Motivation Scale is reliable at a good level in “.86” value.

Gathering and the Analysis of the Data

As a result of the Kolmogov-Smirnov test it was not found that the data distributed normally (p=.024). However, in order to determine the distribution of the data in social science researches, besides Kolmogov-Smirnov test and the test of variance equality hypothesis it must be checked if distribution graphics point out normal distribution with the values of mean, median, mode, Skewness, Kurtosis (Tabachnick and Fidell, 2015). Considering all these values it can be said that the data that belong to this research points out a normal distribution. Thus t-test, which was used for the comparison of the two groups for grade and field variables; Anova test which was carried out for the comparison of several groups, were carried out for the department, grade, the use of internet and morningness-eveningness variables.

FINDINGS

The findings regarding whether the data obtained from academic motivation scale differentiate according to the field, gender, the type of education, department, grade, academic success, morningness-eveningness type and the time spent for the use of internet, are presented in Tables.

| Table 2 | t-test results regarding gender variable |
|---|---|
| Scale | gender | n | \( \bar{x} \) | Ss | sd | t | p |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Academic Motivation | Female | 370 | 73.25 | 9.34 | | | 471 | 1.689 | .092 |
| | Male | 103 | 71.45 | 10.34 | | | | |

p<.05*, p<.01**

As a result of the t-test carried out it was determined that the academic motivation do not differentiate significantly \([t(471)=1.689; p>.05]\) according to the gender variable (Table 2). However it can be stated that the female candidates possess more academic motivation.

| Table 3 | t-test results regarding teaching type variable |
|---|---|
| Scale | Field | n | \( \bar{x} \) | Ss | sd | t | p |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Academic Motivation | Education Faculty | 106 | 76.12 | 8.94 | | | 471 | -.463 | .644 |
| | Formation | 367 | 71.91 | 9.56 | | | | |

p<.05*, p<.01**

As a result of the t-test regarding the type of teaching it was determined that the academic motivation of the teacher candidates do not differentiate \([t(471)=-.463; p>.05]\) (Table 3). However, with reference to group averages it can be said that the academic motivation of the education faculty students is higher compared to the students taking formation education.
Table 4. Anova test results regarding department variable

| Scale          | Department                          | n  | Mean | S.D. | V.K. | K.T.   | sd  | K.O  | f      | p      | Difference |
|----------------|-------------------------------------|----|------|------|------|--------|-----|------|--------|--------|------------|
|                | A. Turkish Teaching                 | 38 | 72.51| 11.23|      | 2249.460| 6   | 374.910|
|                | B. Turkish Language and Literature  | 97 | 75.76| 8.93 |      | 41075.475| 466 | 88.145|
|                | C. PCG                              | 109| 71.57| 9.83 |      | 43324.934| 472 |        |
|                | D. Evening Education                | 91 | 72.37| 7.78 |      |        |     |        |
|                | E. Special Education                | 50 | 72.92| 8.76 |      |        |     |        |
|                | F. Art Teaching                     | 43 | 75.51| 10.66|      |        |     |        |
|                | G. English Teaching                 | 45 | 68.33| 9.93 |      |        |     |        |

As a result of the Anova test it was determined that the academic literacy of the teacher candidates differentiate significantly according to their departments \[F (6,466)=4.253**, p<.01\] (Table 4). Accordingly, significant difference was determined on behalf of the Turkish Language and Literature Department and Art teacher candidates when English language teacher candidates, Turkish Language and Literature Department students and art teacher candidates were compared.

Table 5. Anova test results regarding grade variable

| Scale          | Grade     | n  | Mean | S.D. | V.K. | K.T.   | sd  | K.O  | f      | p      | Difference |
|----------------|-----------|----|------|------|------|--------|-----|------|--------|--------|------------|
|                | A. 9. grade| 57 | 72.5965| 8.90  |      | 218.117| 4   | 54.52| 9      |        |            |
|                | B. 10. grade| 106| 72.4057| 8.70  |      | 43106.817| 468 | 92.10| 9      |        |            |
|                | C. 11. grade| 118| 72.2881| 9.65  |      | 43324.934| 472 | .592 | .669   |        |            |
|                | D. 12. grade| 129| 73.1085| 10.75 |      |        |     |        |
|                | E. graduate| 63 | 74.3810| 9.03  |      |        |     |        |

As a result of the Anova test significant difference was not determined regarding the academic motivation of the teacher candidates \[F (4,468)=.592, p>.05\] (Table 5).
Table 6. Anova test results regarding Academic Success Perception (ASP)

| Scale          | ASP       | n  | X       | Ss  | V.K. | K.T. | sd   | K.O   | f       | p       | Diffe     |
|----------------|-----------|----|---------|-----|------|------|------|-------|---------|---------|-----------|
| A. moderate    |           | 16 | 61.38   | 12.05 | Between groups | 5236.031 | 3 | 1745.344 |         |         | A-B       |
| B. medium      |           | 138 | 69.65   | 9.67 | Ingroup | 38088.903 | 469 | 81.213 | 21.491** | .000    | A-C, A-D  |
| C. Good        |           | 260 | 74.23   | 8.66 |         | 43324.934 | 472 |        |         |         | B-C, B-D  |
| D. very        |           | 59  | 77.41   | 7.95 |         |         |       |        |         |         |           |

p<.05*, p<.01**

In Table 6 the results of the Anova test carried out regarding ASP variable take place. Within the Table it is seen that the academic motivation of the teacher candidates differentiates significantly [F (3-469)=21.491**, p<.01]. It can be said that as long as the ASP of the teacher candidates increases their academic motivation increases as well. Accordingly, between the students, who possess moderate average and the students who possess medium, good and very good average significant difference was found on behalf of the medium, good and very good students. A significant difference was found on behalf of the good and very good students between good, very good students and the students who possess medium average.

Table 7. Anova test results regarding the use of internet variable

| Scale           | The use of internet | n  | X       | Ss  | V.K. | K.T. | sd   | K.O   | f       | p       | Differen  |
|-----------------|---------------------|----|---------|-----|------|------|------|-------|---------|---------|-----------|
| A. Less than an hour |                   | 25 | 78.16   | 10.75 | Between Groups | 1733.045 | 3 | 577.682 |         |         | A-C       |
| B. 1-2 hours    |                   | 158 | 74.30   | 9.40 | Ingroup | 41591.890 | 469 | 88.682 | 6.514** | .000    | A-D       |
| C. 3-4 hours    |                   | 200 | 72.24   | 9.22 |         | 43324.934 | 472 |        |         |         | B-D       |
| D. 4 hours and more |                 | 90  | 70.22   | 9.49 |         |         |       |        |         |         |           |

p<.05*, p<.01**

As a result of the Anova test carried out in order to determine whether the academic motivations of the teacher candidates differentiate according to the time spent for the use of internet significant differentiation was determined [F (3-469)=6.514**, p<.01] (Table 7). Accordingly, it can be said that the academic motivation of the teacher candidates decreases as long as the time spent for the use of internet increases. A significant difference was determined on behalf of the teacher candidates who use the internet less than one hour compared to those who use the internet 3-4 hours and more. Similarly, a significant difference was determined on behalf of the teacher candidates who use the internet 1-2 hours between those who use the internet 1-2 hours and those who use it more than 4 hours.
Table 8. Anova test results regarding chronotype variable

| Scale | Morningness | n  | X  | Ss | V.K. | K.T. | sd | K.O | f   | p   | Difference |
|-------|-------------|----|----|----|------|------|----|-----|-----|-----|------------|
|       | Evenness    |    |    |    |      |      |    |     |     |     |            |
| A. Definitely morningness type | 66  | 73.85 | 10.21 | Between Groups | 159.117 | 3  | 53.039 | .576 | .631 |            |
| B. More morningness type | 161 | 72.70 | 9.16 | Ingroup | 43165.817 | 469 | 92.038 |      |      |            |
| C. More eveningness type | 166 | 72.28 | 9.04 | Total | 43324.934 | 472 |       |      |      |            |
| D. Definitely eveningness type | 80  | 73.53 | 10.96 |            |      |    |     |     |     |            |

p<.05*, p<.01**

When Table 8 is examined as a result of the Anova test it is seen that academic motivation of the teacher candidates do not differentiate according to morningness-eveningness type of the teacher candidates [F (3-469)=.576, p>.05].

CONCLUSION, DISCUSSION AND RECOMMENDATION

Within this part the results that take place in the findings part are discussed and some recommendation is given. Within the research the academic motivation of the female students was found higher than the male students however a significant difference was not encountered. Whereas some researches indicate that gender factor does not constitute a difference in terms of motivation levels of the teacher candidates, some researches on the other hand indicate that the academic motivation levels of the female students is higher compared to the male students. Within the studies that show parallelism with the results of our research (Saracaloğlu, 2008; Saracaloğlu, Karasakaloğlu and Yenice, 2008; Şahin and Çakar, 2011) whereas a significant difference does not develop in terms of the academic motivation scores of the female and male teacher candidates; there are studies asserting that the female students’ motivation levels are higher than the male students’ motivation levels. (Ellez, 2004; Akdemir, 2006; Çelik, 2006; Onuk, 2007; Yılmaz, 2007). These results indicate that gender factor can show two different results in terms of academic motivation. On the other hand, no study, which indicates that male students’ academic motivation is higher compared to female students, was found.

It is seen that the motivation levels of the teacher candidates do not differentiate according to teaching type and grade variables. It is seen that generally the students taking formation education possess more academic motivation especially graduated ones compared to those who still continue undergraduate education. It is known that in our country unemployment is an important problem among university students. Therefore, the number of the people who want to be a teacher and have pedagogic formation is increasing day by day. For this reason, it would not be wrong to claim that the expectation to find a job as a teacher will increase the eagerness to learn and the motivation of the teacher candidates in our study group.

The academic motivation levels of the teacher candidates differentiate significantly according to department. The academic motivation levels of the teacher candidates who study in Turkish Language and Literature department and Art Teaching department were found higher than the teacher candidates from English Teaching department. This result can be explained with the fact that the rate of appointing teachers within the period when the research was carried out differentiate according to department. On the other hand since the appointing rate of the students from Turkish Language and Literature
department and Turkish Teaching department is less compared to English Teaching department, they might have needed to maintain the rate of finding a job high, studying KPSS (Public Personnel Selection Examination).

The academic motivation levels of the Elementary teacher candidates do not indicate a significant difference according to education type. The arithmetic average of the academic motivation levels of the daytime education students and the arithmetic average of the academic motivation levels of the evening education students indicate very close numerical value. This close academic motivation level score between these two groups can be related to the fact that the scores of the daytime education and the evening education is very close to each other within the university entrance examination. Differently from the results of our research in the studies of Terzi, Ünal and Gürbüz (2011) it is stated that the academic motivation levels of the daytime education students is higher compared to evening education students besides this difference is significant.

Another finding obtained from our research is related to significant differentiations between academic success perception and academic motivation. It is seen that the teacher candidates, who described academic success perception as very good and good, possess high levels of academic motivation at the same time. This result is quite meaningful actually and supports learning psychology data in the literature (Kaya, 2012).

One of the final findings of our research is that there is not a difference between the chronotype and the academic motivation levels that the students possess. Academic motivation levels were found almost equal in both chronotypes. This result may be related to the fact that the teacher candidates are aware of their learning process and they possess appropriate self-regulation skills according to their morningness or eveningness type. In other words, both chronotypes can arrange their biological rhythms appropriately in order to be motivated. In this sense it may be appropriate to check whether this skill is developed or not in different stages in elementary or secondary education.

In conclusion this study, which is a review on the role of academic motivation in education processes, includes information concerning how often the internet is used, cognitive absorption and chronotypes will reflect on learning processes. Therefore, it can be said that in the name of searching, studies especially regarding the intermediary role of these two variables need to be carried out especially with large groups. Regarding the application area with the help of this data it will be appropriate to perform awareness studies regarding the use of internet and chronotypes that have a role within the academic motivation of the teacher candidates.

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