EXTENDED SUMMARY

Self-efficacy is one’s belief in his/her ability to carry out certain actions or perform particular tasks (Bandura, 1997). It affects his/her behavioral conditions and activities, such as how much effort he/she will make for something or how much they can withstand obstacles and problems. The higher one’s self-efficacy level is, the stronger his/her ability is to cope with hardships (Bandura and Adams, 1977). Academic self-efficacy is one of the substantial factors that promotes one’s achievement in the educational environment. An identification of prospective teachers’ academic self-efficacy levels will reveal how much effort they will make to perform their academic tasks and train students as well as the extent to which they can withstand hardships.

The Purpose of the Study
The purpose of the present study is to identify prospective science teachers’ academic self-efficacy levels in reference to the variables grade and gender.

The following research questions were posed:
1. How high are prospective science teachers’ academic self-efficacy levels?
2. Do prospective science teachers’ academic self-efficacy levels differ depending on gender?
3. Do prospective science teachers’ academic self-efficacy levels differ depending on grade?

Methodology
The present study was based on the survey model. The population of the study was comprised of 252 prospective science teachers from the Faculty of Education, Kafkas University. An attempt was made to access the whole target population. Eventually, a total of 252 first, second, third and fourth grade prospective teachers who filled in the questionnaire form properly participated in the study.

The data were collected through the Academic Self-Efficacy Scale, which was developed by Jerusalem and Schwarzer (1981) and adapted to Turkish by Yılmaz, Gürçay and Ekici (2007). The Academic Self-Efficacy Scale consisted of seven items in one single dimension. The grading was based on a four point Likert rating, namely “non-applicable to me at all (1)”, “slightly applicable to me (2)”, “applicable to me (3)” and “completely applicable to me (4)”. The adapted scale had a Cronbach’s alpha coefficient of 0.79 whereas the value was 0.66 in the present study.

Conclusion and Discussion
The study concluded that the prospective science teachers had a high level of academic self-efficacy. The extent to which prospective teachers are trained to be competent in their profession is important, so is the extent of their perceived competencies. The latter depends on not only teachers’ confidence in themselves but their ability to recognize and assess themselves as well. If a teacher can objectively assess and have confidence in himself/herself, he/she is more likely to be successful (Ustuner, Demirbas, Comert and Ozer, 2009). When all things were considered, the present study made an attempt to identify the prospective science teachers’ self-efficacy levels. The participants had a high level of academic self-efficacy, which suggests that they believed in themselves in academic terms. This is a promising finding and means that prospective teachers’ future achievement can be predicted in this way.

Another finding revealed by the study is that there was not a difference between the participants depending on the variable gender. Similarly, Sahin, Gulay Ogelman and Ekici (2011) report that academic self-efficacy is not influenced by gender. This is a finding also supported by several other studies in the literature (Hackett, Betz, Casas and Rocha-Singh, 1992; Savran and Cakiroglu, 2001; Chu, 2003; Yaman, Cansungu Koray and Altuncekic, 2004; Cakir, 2005; Akbas and Celikkaleli, 2006; Gerczek, Yilmaz, Koseoglu and Soran, 2006). Therefore, it can be argued that both female and male prospective teachers have similar levels of academic self-efficacy.

The present study also found that the variable grade led to a significant difference between the participants, with third and fourth grade prospective teachers having higher levels of academic self-efficacy. Schunk and Pajares (2001) reported that school curriculum enables students to develop certain skills, these skills are improved as students move to higher grades, and self-efficacy should get improved along with the grade, too. Similarly, Oguz (2012) found that fourth grade prospective teachers had higher levels of academic self-efficacy. This studies have reported that higher-grade students have higher levels of academic self-efficacy when compared to lower-grade students. Nevertheless, the development of self-efficacy could be retarded by the same type of instruction over time as well as erroneous school practices (Schunk and Pajares, 2001).
The development of self-efficacy will be positively influenced when teachers use different teaching methods to establish a learning environment rich in stimulus. Great care should be taken to make sure that prospective teachers carry out activities in an exact manner during classes. In particular, their self-efficacy beliefs about the profession of teaching should be strengthened through micro-teaching practices. In addition, they should be closely monitored and communicated in such courses as School Experience and Teaching Practice.