The Magnus Effect Behind the Transition to Higher Education in Türkiye: Uncovering Equity Issues

Türker Kurt, Pinar Ayyildiz, and Tuncer Fidan

Abstract

We analyzed the links between access to higher education, exams, and equity in education in Türkiye. Next, we made numerous recommendations and referred to a phenomenon: "The Magnus Effect" to delve into the problems of the relevant processes. After conducting a review of the literature, we came up with four core sources that produce equity issues: tracking, stratification, socioeconomic status, and the qualifying elimination system. One of the ironies was that access to higher education institutions is enabled via high-stakes national exams, which seem to legitimize the process while leading to countless more inequities.

A total stranger might not easily comprehend the significance of an assemblage of diverse individuals from all walks of life patiently waiting, though anxious, and holding their breath on a warm day in June at schools all over Türkiye. These crowds comprise parents, grandparents, siblings, officers, and a fair number of other immediate stakeholders in a lifetime experience: the national university entrance exam (Transition to High School Exam, THE). As a matter of fact, they are the ones accompanying candidates taking the exam. The authors of this paper all went through these extremely tough times with their families as well so that they also could be deemed "appropriate" to go into a higher education institution, to continue to work hard, and to graduate with a diploma, which may or may not warrant their employment. In fact, one the authors, who is female, might be feeling relatively "luckier" (if not *privileged*)—bearing in mind her parents are both academics—as she became a faculty member, unlike other women who struggle with the risk of dropping out of school, early marriage, and/or child labor despite all the ongoing effort to mitigate these problems in 21st century Türkiye.

This is a clear picture of Türkiye on the days of these high-stakes examinations. To this end, this paper attempts to address the "total stranger" mentioned above with a view to depicting, questioning, and criticizing the existing—and at times surprising—situation in Türkiye, a developing country that has millions of refugee students, together with a highly heterogeneous profile of learners and teachers. The country was recently identified by the Organization for Economic Cooperation and Development (OECD) as having an extremely high number of young people who are not employed, educated, or trained (NEET). As such, it would be fair to state that our initiative as Turkish researchers can help "outsiders"—for instance living in the Global North—to reconsider the case with their own countries, make comparisons, and hopefully become more knowledgeable and prepared for cross-national cooperation and collaboration to maintain an equitable mindset and related practicum for education matters around the world.

Background

It is important to chronicle the particularities of the university system in Türkiye. National university entrance exams have been implemented in Türkiye, though in varying forms, since 1964. These are high-stakes and often two-stage examinations. The exams in question are entitled Higher Education Institutions Examinations; there are core competence tests and tests that assess the knowledge acquired with respect to specific subjects. Candidates are expected to reach the specified grade threshold in the former and basically strive for being more successful than the other candidates in the latter to be placed in their desired area of study at a university.

All the exams are administered by the Measurement, Selection and Settlement Centre, which is as an autonomous government agency in Türkiye. For the past decade, a series of sessions have been administered nationwide as part of the whole process within the system that allows or disallows access to higher education through monitoring candidate eligibility. This process basically consists of obtaining the relevant scores from two to three sessions of exams conducted (comprising 78% of the final score) along with the high school grade point average (HGPA comprising 12% of the final score) for each candidate where the HPGA has relatively less weight in the total score. For each of the candidates, a total score is calculated, and if sufficient, allows them to continue with the process. Next, they are able to make decisions on the most appropriate higher education institutions, in line with the aforementioned total score and "ideally" in line with their interests, preferences, and aptitudes.

However, there are always innumerable system-wide changes that a student inevitably experiences before graduating from high school. For instance, in a study carried out between 1999 and 2011, technical aspects such as the number of exam questions and the scope and the duration of the exam changed "dozens of times" (Taşpınar Cengiz & İhtiyaroğlu, 2012). Without a doubt, such a structure which is constantly changing and causing uncertainties makes students, families, teachers, and other parties anxious or leaves them in difficult situations (Güler & Çakır, 2013; Gür & Özoğlu, 2015; Taşpınar Cengiz & İhtiyaroğlu, 2012).

In spite of these constant changes, the modus operandi still seems to cater to the expectations from a highly competitive system that is originally intended to serve all citizens equally. To a certain extent, the model directs all the candidates to sit a number of exams and to perform well during high school years. While claiming to be strive for equality, the current system in Türkiye is actually far from operating on a wholly equitable basis. Furthermore, it is evident in the international body of literature that central university entrance exams are indeed causing a number of equity issues (e.g., González Canché, 2019; TED, 2010; Wightman, 2003).

Taking these factors into consideration, it can be surmised that these exams also represent some of the issues pertaining to equity, in particular when recalling the multiple, and, at times, last-minute, changes made to the system.

The analogy of the Magnus Effect helps shed light on the current situation in Türkiye. Well known in the field of Physics, the Magnus Effect provides the rationale behind the different routes taken by two objects

(i.e., two similar balls that stand exactly at the same point prior to being pushed at the same speed in the same direction). Undoubtedly, there are incalculable factors which come into play during their motion: the material they are made of, the current of air at that moment, the nuances in the force applied and numerous other elements. However, even if the other factors are somewhat neutralized, the material the object is made of is extremely important. This is due to the fact that it determines the balls' point of destination. Similarly, the destination the university candidate arrives at, depending on their background, is also predetermined to a very large extent. We believe the visual (Ireson, 2000, p. 10) below offers a useful depiction of the present-day situation for university candidates in Türkiye:

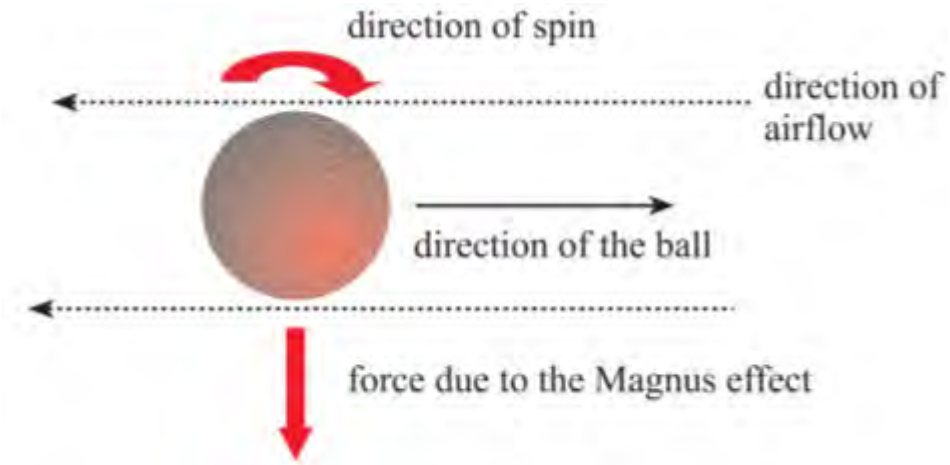

Fig. 1: Magnus effect (Ireson, 2000, p. 10).

As described earlier, millions of candidates in Türkiye take the same exam administered at the same time in all the predetermined locations across the country, for the chance to gain access to higher education. Why do some succeed in reaching the gates of universities while others lose their way (like some of the aforementioned balls that are moved), going into separate directions? Is it simply because of the "scores" obtained on the way—similarly to what happens in a video game? Are there are any reasonable or, more importantly, humane explanations that can shed light on what might be causing deviations in the desired path, as is the case with the Magnus Effect? Our answer here is, "no" indeed. However, we can refer to the Magnus Effect again to highlight the inequities through the allegory. Along the same lines as what happens to the pushed objects due to the Magnus Effect, the system invites the individuals wishing to enter university to the "game." Next, the "fate" (the decision) is determined through the mechanism, namely, through several parameters that do not really allow for equity while claiming to assure equality among candidates.

There is a lot going on behind the scenes in the process of trying to gain access to higher education in Türkiye, which unfortunately adds to preexisting issues. These can first be handled through the lens of equity, touching on the main components of the mechanism that allows candidates to begin their new lives at university. As has been previously discussed, there are many research results which reveal factors that make transition to higher education far from equitable. These are the differences in success between school types (Berberoğlu & Kalender, 2005; ÖSYM, 2018; Köse, 1999; Suna et al., 2020b; Suna et al.,

2020a), socioeconomic background of students who sit the exams (Suna et al., 2020a; Suna et al., 2020b), limiting access to higher education through extremely important exams with one or two sessions (Köse, 1990; Yolcu, 2015). The inequities that occur owing to these realms intersect at various points and, furthermore, it is clear they are oftentimes interwoven. Without a doubt, these factors come into play when candidates arrive at the gates of the university, reminding us of the determining factors related to the destination of the balls in the Magnus Effect.

In this article, we have tried to focus on equity problems associated with the transition to higher education and particularly with its exam-oriented nature. To that end, we have identified four main problem areas: tracking, stratification, socioeconomic status, and the qualifying elimination system itself.

Tracking: A Mechanism Through Which Inequities Are Reproduced

Taking a glance at the literature in its simplest sense, tracking seems to be a means to sort students based on external factors, which are, in reality, beyond their control, in a highly capitalist manner (Wells, 2018). In a similar vein, in a recent study conducted in Türkiye, problems with educational equality have been explored through the tracking system in which the concepts "dreams vs. realities" were used to indicate the "cruel" dimensions of the system that interfere with the expectations and hopes of young people (Ozer & Perc, 2020). It goes without saying that for developing countries like Türkiye, which are also populous, university entrance exams are of crucial importance (OECD, 2004). They are utilized to make decisions about the transition to university through national test scores. In Türkiye, the tracking system turns into a direct source of inequality, and this is evident in the actual purpose of tracking: providing diverse high school options for students with different needs and desires. Thus, for Türkiye, student performances differ to a great extent in university entrance exams since university candidates have already undergone tracking through national high school entrance exams, which, again, are high stakes in nature. In this sense, Türkiye is reported as one of the countries with the highest difference amongst school types in numerous studies (Berberoğlu & Kalender, 2005; Gümüş & Atalmış, 2012; Suna et al., 2020a/2020b; OECD, 2018; TED, 2010; Worldbank, 2013). The most successful high schools in the university exam are "science high schools," whereas the most disadvantaged high schools are vocational high schools. As is the case in most parts of the world (Wightman, 2003), Turkish students from disadvantaged parts of society, such as refugees, mostly go to vocational schools (Çelik, 2015; World Bank, 2013), while students from middle- and upper-class socioeconomic backgrounds continue to study at relatively more prestigious high schools like science high schools (Berberoğlu & Kalender, 2005; Suna et al., 2020a/2020b) or private high schools that offer curricula that are mostly university entrance exams—oriented together with the promise of classes conducted in English. In this frame of reference, the tracking system makes up both the cause and one of the results of educational inequities.

Tracking spans the entrance race from the pre-high school level all the way to university admission. Moreover, the type of high school turned out to be a key determinant in the university admission process, in particular resulting from the effect of the weighted high school grade point average (WHSGPA) practice implemented in Türkiye for years (Kurt & Gür, 2012). WHSGPA is used to weight the high school grade point average (HSGPA) based on the academic success rate of high school graduates. In other words, as

the number of students that successfully passed the university admission exam in a high school increased, so too did the coefficient that was multiplied by HSGPA of the students at that specific school. The chief purpose of this application was to protect students who graduated from science high schools, where relatively heavier curricula are implemented, against the possibility of common high school or vocational high school students getting higher graduation grades when they finish high school. Nevertheless, the influence of such a factor (the type of high school graduated from), which was not closely connected to the student's intentional acts or study habits and talents, on the university admission, had given rise to a complete inequality. In 2012, the application of the practice of integrating WHSGPA was abolished and since then, solely a certain ratio of HSGPA has been added to the sum of university admission points. On account of the fact that the tracking evolves into a greater element of inequity, studies and policy documents have now recommended to diminish the variety of schools in secondary education in Türkiye (World Bank, 2013; Çelik, 2015).

Stratification as An(other) Emergent Factor

Although it is a topic considerably related to tracking, stratification among high school types can be regarded as one of the inequality-producing results of the exam-based university admission systems. That said, stratification includes a problem that perhaps poses a greater threat to the system than tracking. It not only emerges between dissimilar school types, but also among the same types of schools (Gür & Özoğlu, 2015). For instance, certain high schools may become more advantageous in comparison to their counterparts as relatively more of their students become successful in university admission exams. This may also trigger yet another problem: students may gravitate toward a certain school instead of a specific type of school, which is a situation that can be widely observed in Türkiye. For example, one of the two closely located Anatolian high schools in the same neighborhood may enroll students with higher High School Admission Exam grades. It should be pointed out that students tend to opt for the more prestigious school, namely the one that accepts applicants with higher grades. In this context, the concentration of successful students at particular schools has gradually interfered with the difference in quality between the schools. When a system approach, which emphasizes the importance of inputs for the overall functioning of a system, is used to address this situation, it is clearly seen that students gathering in schools with higher academic success rates have an advantage over their peers at those schools with relatively lower levels of academic success.

On account of the competitive but unequal race caused by tracking and stratification, the percentage of academic high schools enrolling students through examinations reportedly rose from 2% in the 1990s to 20% in 2010, 36% in 2012, over 50% in 2013 and 100% in 2014 (Gür et al., 2013; MEB, 2014). Ranking all schools and students in score tables and enrolling students based on grades, made the secondary education system much more hierarchical than ever before. In addition, this has resulted in labelling students and schools, which discourages teachers and students in lower-ranked schools. Last, but not least, enrolling students with the same level grades to the same schools weakened the effects of peer learning and school-environment relationships (Çelik, 2015), which could be taken as another pivotal side effect of the present mechanism.

Socioeconomic Background: The Key Element Affecting Achievement

A considerable number of students, who wanted to be successful in the exam, had received preparatory training from private courses together with their school education until 2015. When these courses were officially closed down in 2015, this subject took on a different shape. After this incident, once these courses were abolished, students tended to receive outside support, oftentimes in the form of individual preparatory training sessions. Since both private courses and individual preparatory training offerings are closely linked to students' socioeconomic status, they have given rise to another inequity problem.

The examination-based entrance system leads students to seek ways to be ahead in the race even though authorities try to discourage such attempts. Given that GPA affects university admission exam grades, students may choose to transfer from their schools, where getting higher grades is difficult, to other schools to enhance their grades. Today, it is observed that thousands of students choose to be at Open Highschool via distance education in their last year of study. Another strategy used to get a leg up on the competition: students and families search for excuses for absenteeism (e.g. obtaining health reports), since the final year in high school requires intense preparation for exams. Paradoxically, this situation has introduced a mentality suggesting that students can be more successful in national high stakes exams if they do not continue their school education in the traditional way. Open Highschool is also attractive because it permits students to remain at home and study hard.

These "behind-the-scenes" occurrences that affect the success or failure in the university entrance exam reveal a lot about the educational inequities and, in fact, may sound rather absurd to outsiders who are not familiar with the system in Türkiye. Being lucky enough to take one-on-one private courses all throughout, stay at home, and focus fully on the exam preparations are the salient components of the whole.

As for GPA, one of the striking sources—or perhaps the main one—of inequities is the school itself and all that it encompasses: the curriculum, the teachers, the ethos, the learners, and the stakeholders. In fact, a large spectrum is witnessed in Türkiye when it comes to high school types. Not surprisingly, this spectrum is mostly related to the "high school entrance exam" administered in a similar manner to the university entrance exam, which was previously discussed in this article. Without a doubt, socioeconomic determinants and regional differences play a significant role here.

High Stakes Admission Tests: The Main Facilitators of the Mechanism

The notion of sitting a single or a couple of exams of vital importance to enter into university after years of education is inherently inequitable. Holding an examination only once in a year and the extension of examination sessions that include hundreds of questions and hundreds of minutes create a psychological burden for many students (Taşpınar Cengiz & İhtiyaroğlu, 2012).

In Türkiye, the examination policy and the effects of high school types on exam grades, gave rise to high school admission exams. Children are engaged in a race to be admitted to more popular high schools. Therefore, middle school education became a system featuring predominantly the preparation for high

school admission exams; in other words, a system that promotes never-ending tests and test-preparation. Accordingly, children started to take education focusing on solving multiple-choice questions beginning from the first grade of elementary school. Moreover, families, teachers, and schools all hold the belief that the lives of children depend on their success in these exams. Once again, recalling the Magnus Effect, we assert that the more one is engaged in tests at an early age, the more likely it becomes for one to be directed toward a "good" destination when the university entrance exam time comes. In other words, together with the other advantages that a person may innately have, familiarizing themselves with examinations at a young age puts them in a more advantageous position.

There are numerous criticisms about the negative effects of exam-based education. For example, it is thought that students spending their academic lives with multiple-choice tests from primary school to high school cannot sufficiently acquire advanced reading, writing, or critical thinking skills, which are deemed necessary for tertiary level education. As such, students may fail to reach the minimum requirements of academic success in university life and are unfulfilled from the education they receive in universities (Kurt & Fidan, 2019; Ural, 2016).

Furthermore, stress and anxiety caused by these exams can hinder students from making healthy choices. The fact that the central examination system poses many problems regarding unhealthy university and/or department choices, has also been revealed by a survey of the literature (e.g., Korkut-Owen et al., 2012; Fidan et al., 2018; Özsoy et al., 2010; Sarıkaya & Khorshid, 2009; Tataroğlu et al., 2011). Within this point of reference, even though students have access to a university, it is not very likely that this will benefit them. It is difficult or, at best, coincidental, for students to choose the right major in accordance with their interests, preferences, and abilities.

Conclusion, Discussion, and Implications

The main result of this research is that university entrance exams, which are highly legitimate in social terms, produce serious inequities. Such exams do not respond well to the educational and individual needs of the students—or even cater to societal demands. Moreover, these exams are transformative in nature; they shift the mechanism and leave it full of inequities. The most typical example of this is tracking. Tracking now appears to have turned into a medium that distinguishes students partly with respect to their achievement differences, and to a much greater extent, with respect to their socioeconomic background. With stratification, specific schools are able to attract students with high(er) academic achievement levels when others cannot. The fact that a student's socioeconomic background is the most important variable for receiving a good education at high school and ensuring a "smooth" transition to a good university clearly discloses the unequal face of transition and access to higher education.

It is undeniable that an exam is still and, inevitably, the most legitimate method of entering a higher education institution, in particular for developing countries like Türkiye with millions of high school graduates. Notwithstanding, considering the issues of equity produced by the examinations and the system, it is vital to accept that the legitimacy of the examination should be deeply questioned. Obviously, it is not just or sustainable to adopt such an examination-centered system. In education systems where lasting problems are not acknowledged, students are urged to face the reality of exams beginning from early on. In a way, this is the hidden facet of the so-called legitimacy of the exams and that of the related systems. In this direction, (re)establishing a system that will pave the way for an equitable evaluation of individuals with unique needs, aptitudes, capacities, and capabilities, and, of course, aspirations, will be a meaningful and purposeful act. Such an endeavor will require the involvement of all stakeholders from learners themselves to policymakers, authorities, educators, and researchers in the planning, implementation, and sustaining of the novel structure.

So as to reduce—if not minimize—the pressure created by the exam-based system on teenagers sitting the high-stakes exams as a shorter-term solution, some other suggestions could be made here. The university entrance exams may be carried out at a few times in an academic year in a successive way throughout and/or alternative exams can be in effect (e.g., administered at differing levels targeting distinctive competences); some of the exams can include open-ended questions and alternative parts that encourage the candidate to express themselves; along with this, the share of the high school graduation grade in the university entrance score might be revisited to ensure a decrease in the high-stakes nature of the exams. That said, all these suggestions entail an equitable approach toward the said checkpoints and assessments.

Recalling the many potential results of the Magnus Effect, university entrance exams in Türkiye are inherently complicit in the mechanism of inequality, making a student's chance of success dependent on too many factors beyond their control.

References

Berberoğlu, G., & Kalender, I. (2005). Investigation of student achievement across years, school types

Çelik, Z. (2015). Ortaöğretime ve yükseköğretime geçiş sınavlarının kıskacında ortaöğretim sistemi. In A. Gümüş(Ed.), *Türkiye'de eğitim politikaları*. Nobel Yayıncılık.

Fidan, T., Öztürk Fidan İ., & Öztürk, H. (2018). Meslek Yüksekokulu öğrenci ve mezunlarının kariyer seçimlerine etki eden faktörler ile kariyer beklentileri: Öz yeterliğin aracı rolü. *Yükseköğretim Dergisi, 8*(3), 249–263.

González Canché, M. S. (2019). Repurposing standardized testing for educational equity: can geographical bias and adversity scores expand true college access?. *Behavioral and Brain Sciences, 6*(2), 225–235.

Güler, D., & Çakır, G. (2013). Examining predictors of test anxiety levels among 12th grade high school students. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 4*(39), 82–94.

Gümüş, S., & Atalmış, E. H. (2012). Achievement gaps between different school types and regions in Türkiye: Have they changed over time?. *Mevlana International Journal of Education, 2*(2), 48–64.

Gür, B. S., & Özoğlu, M. (2015). Türkiye'de yükseköğretim politikaları: Erişim, kalite ve yönetim. In A. Gümüş (Ed.), *Türkiye'de eğitim politikaları*. Nobel Akademik Yayıncılık.

Gür, B. S., Çelik, Z., & Coşkun, İ. (2013). *Türkiye'de ortaöğretimin geleceği: hiyerarşi mi, eşitlik mi?*. Siyaset, Ekonomi ve Toplum Araştırmaları Vakfı.

Ireson, G. (2000). Beckham as physicist?. *Physics Education. 36*, 10. https:/doi.org/10.1088/0031-9120/36/1/301.

Korkut-Owen, F., Kepir, D. D., Özdemir, S., Özlem, U., & Yilmaz, O. (2012). Üniversite öğrencilerinin bölüm seçme nedenleri. *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 8*(3), 135–151.

Köse, M. R. (1990). Aile sosyo ekonomik durumu, lise özellikleri ve üniversite sınavlarına hazırlama kurslarının eğitimsel başarı üzerine etkileri. *Eğitim ve Bilim, 76*, 57–65

Köse, M. R. (1999). Üniversiteye giriş ve liselerimiz. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 15*, 51–60.

Kurt, T., & Fidan, T. (2019 May 2-4). *Kariyer yolunda üniversite: Beklentiler ve gerçekler.* [Paper presentation] 14th International Congress on Educational Administration, İzmir, Türkiye.

Kurt, T., & Gür, B. S. (2012). *Eğitimde eşitsizliğin algoritması: AOBP*. Siyaset, Ekonomi ve Toplum Araştırmaları Vakfı.

MEB. (2014). *2014 Yılı ortaöğretim kurumlarına geçiş uygulaması tercih ve yerleştirme e-kılavuzu*. http://www.meb.gov.tr/meb_iys_dosyalar/2014_06/2014_Yılı_Ortaogretım_Kurumlarına_Gecıs_Uygulaması_Tercıh_ve_Yerlestırme.pdf

OECD. (2004). *How student performance varies between schools and the role that socio-economic background plays in this*. OECD Publishing.

OECD. (2018). *Education at a glance 2018: OECD indicators*. OECD Publishing. https://doi.org/10.1787/eag-2018-en.

ÖSYM. (2018). *2018 Yükseköğretim kurumları sınavı değerlendirme raporu*. ÖSYM.

Özer, M., & Perc, M. (2020). Dreams and realities of school tracking and vocational education. *Palgrave Communications, 6*, 34.

Özsoy, G., Özsoy, S., Özkara, Y., & Memiş, A.D. (2010). Öğretmen adaylarının öğretmenlik mesleğini tercih etmelerinde etkili olan faktörler. *İlköğretim Online, 9*(3), 910–921.

Sarıkaya, T., & Khorshid, L. (2009). Üniversite öğrencilerinin meslek seçimini etkileyen etmenlerin incelenmesi: Üniversite öğrencilerinin meslek seçimi. *Türk Eğitim Bilimleri Dergisi, 7*(2), 393–423.

Suna, H., E., Gür, B.S., Gelbal, S., & Özer, M. (2020a). Science high school students' socioeconomic background and their preferences regarding their transition into higher education. *Yükseköğretim Dergisi*. https://doi.org/10.2399/yod.20.734921

Suna, H. E., Tanberkan, H., Gur, B.S. , Perc, M., & Ozer, M. (2020b). Socioeconomic status and school type as predictors of academic achievement. *Journal of Economy Culture and Society, 61*, 41–64. https://doi.org/10.26650/JECS2020-0034

Taşpınar Cengiz, D., & İhtiyaroğlu, F. (2012). 2006-2011 Yılları arasında üniversite giriş sınavındaki sistem değişikliklerinin üniversiteye öğrenci yerleştirmedeki etkisinin illere göre çok boyutlu ölçekleme analizi ile incelenmesi. *Trakya Üniversitesi Sosyal Bilimler Dergisi, 14*(1), 319–336.

Tataroğlu, B., Özgen, K., & Alkan, H. (2011). Matematik öğretmen adaylarının öğretmenliği tercih nedenleri ve beklentileri. *2nd International Conference on New Trends in Education and Their Implications*. Siyasal Kitabevi.

TED (Turkish Education Association). (2010). *Ortaöğretime ve yükseköğretime geçiş sistemi*. TED Publishing.

Ural, A. (2016). Yarışmacı eğitim anlayışının etkileri üzerine bir çözümleme. *Eleştirel Pedagoji, 43*, 19–24.

Wells, C. L. (2018). Understanding issues associated with tracking students in mathematics education. *Journal of Mathematics Education, 11*(2), 68–84. https://doi.org/10.26711/007577152790028

Wightman, L. F. (2003). Standardized testing and equal access: A tutorial. In M. Chang, D. Witt, J. Jones, & K. Hakuta (Eds.), *Compelling interest: Examining the evidence on racial dynamics in higher education*. Stanford University Press.

World Bank. (2013). *Promoting excellence in Türkiye's schools, 77722*, 1-45, The World Bank. http://documents1.worldbank.org/curated/en/944721468110943381/pdf/777220REVISED00B00PUBLIC00Egitim0EN.pdf

Yolcu, M. A. (2015). *Observation of the effects of family socio-economic status and parent attitudes on exam anxiety levels*. [Unpublished Master's Thesis]. Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya/Türkiye.

Türker Kurt completed his undergraduate education department of elementary education at Karadeniz Technical University, Turkey. He completed his postgraduate studies in Gazi University in the field of education management. He has been in the USA as a visiting scholar at the Department of Educational Leadership and Policy Analysis at the School of Education at the University of Wisconsin-Madison. He still works at the Department of Educational Sciences at Gazi University as an Associate Professor and is a visiting professor in University College London. He conducts research on issues such as educational leadership, higher education management, financing of education, and employability.

Pinar Ayyildiz is a translator/interpreter, sociologist, teacher trainer, language instructor and holds MA and Doctor of Philosophy degrees in Educational Management. She worked as a head teacher, academic coordinator, dean of students, and director of English preparatory schools in higher education institutions. To date, she has taught several courses in various faculties. She has worked on topics like Epistemology of Educational Sciences. She holds numerous academic memberships and is the reviewer/editor of international journals.

Tuncer Fidan received his BA degrees in Linguistics from Hacettepe University and from the Department of Economics at Anadolu University, Turkey. He received an MA degree and a PhD at Ankara University in Educational Administration and Supervision. He worked as teacher and education inspector for Ministry of National Education of Turkey. Currently, he is working as an internal auditor in Burdur Mehmet Akif Ersoy University. His research interests include educational leadership, organizational legitimacy, institutional theory, and qualitative methods. He has published papers in national and international journals. Dr. Fidan is a member of British Educational Leadership and Management Society (BELMAS).