Facilitators and barriers to creating a culture of academic integrity at secondary schools: an exploratory case study

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Abstract

Academic integrity is a vital pedagogical responsibility that educational institutions should explicitly address. One of the best ways to uphold academic integrity is to create a culture of academic integrity throughout the school. This is especially imperative at high schools where students develop their moral identity because students who act dishonestly at high school will likely behave accordingly in post-secondary education and ultimately be dishonest in familial and professional settings. Creating a culture of academic integrity is a challenging, long and multifaceted journey. In this respect, this exploratory case study set out to create a culture of academic integrity at a high school in Türkiye and explore what facilitates and impedes the process. We followed Stephens' (2016) Multilevel Intervention Model and implemented a School-Wide Education program to guide us through the process. We conducted various activities throughout one academic year, from seminars to competitions. At the end of the term, we conducted individual and focus group interviews with the members of the school community and analyzed the interview data to identify facilitators and barriers of the process. The analysis yielded five facilitators (1) creating buy-in, (2) administrative embracement and support, (3) activities that promote student involvement, (4) external expert and school collaboration as praxis, and (5) policy as the blueprint and five barriers (1) deficiencies in responding academic misconduct, (2) prioritization of academic success over academic integrity, (3) teacher resistance against change, (4) exam-based assessment design, and (5) timing of the activities. Each theme was discussed in detail, and recommendations were made for high schools which set out on a journey of creating academic integrity culture.

Keywords: Academic integrity, Culture of academic integrity, Facilitators, Barriers, K-12

Introduction

Council of Europe defines education as a process that has a fundamental influence on the mind, character and physical ability of individuals resulting in the transmission of knowledge, skills and values from one generation to another (Council of Europe 2020). Along with this definition, educational institutions aim to foster a self-actualized society (Cangemi 1987) by providing individuals with the necessary

understanding, knowledge, skills and values, which are the fundamental components of education. An educational institution is expected to pay utmost care and effort to the realization of these components. The imbalance or negligence of one component or prioritization of one to another, such as prioritizing knowledge and skills over values, could lead to inconsistencies in educational outcomes. Typically, educational institutions are more likely to focus more on students' academic achievement (knowledge or skills) and may underestimate academic integrity (values). Or, on the student side, getting an 'A' may be more important than morality for many students (Wangaard & Stephens 2011). However, it is well-established that students cannot be genuinely successful without integrity (Bertram Gallant 2018). Academic integrity should be an essential component of academia and at the core of all scholarly works (Eaton & Christensen Hughes 2022). Moreover, academic integrity is a vital pedagogical responsibility that educational institutions should explicitly address (East 2016). Therefore, academic integrity cannot (and should not) be isolated from any educational issue. Referring back to the definition of education, it is only with academic integrity that educational institutions can raise individuals who embrace certain values and transmit them to the next generations by leading a positive change in communities. Accordingly, the ultimate aim of educational institutions should be to bring up individuals who are academically successful and embrace the fundamental values of academic integrity which are honesty, trust, fairness, respect, responsibility, and courage proposed by International Center for Academic Integrity (ICAI 2021).

In order to fulfil this ultimate aim, all stakeholders of education should take academic integrity seriously. McCabe et al. (2012) observe that

> *When people ask us, which many have, why we care so much about academic integrity when the world is gripped by bigger problems, we find this question perplexing. It challenges a view that we take for granted: that academic integrity matters a lot, especially when viewed as a barometer of the general ethical inclinations of the rising generation. We view academic integrity as a harbinger of things to come, a reflection of the general mores that society is passing on to the next generation. (McCabe et al. 2012, p. 3)*

Following this statement, McCabe et al. (2012) propose six reasons why we should care about academic integrity:

1) integrity is the cornerstone of academia,
2) cheating is widespread and on the rise,
3) the college years are a critical period for ethical development,
4) college students face significant pressures to cheat,
5) students are being taught that cheating is acceptable, and
6) today's college students represent tomorrow's leader. (McCabe et al. 2012, p. 3)

From this standpoint, it is essential to foster academic integrity and take action during pre-university years (Wangaard 2016) when students develop their positive and ethical competencies (Berkowitz 2011) because academic dishonesty is an epidemic and three defining characteristics of this epidemic are common, contagious

and corrosive (Stephens 2019). Many studies show that students have experienced a form of academic dishonesty in pre-university years, and they are likely to continue in higher education (Bertram Gallant & Stephens 2020; Hendershott et al. 2000; Hossain 2021; Stephens 2019). Academic dishonesty is a prevalent problem affecting all education stages and concerns all stakeholders (Whitley & Keith-Spiegel 2002). It is no surprise that, when not prevented, academic dishonesty might lead to corruption in society and pass on from one generation to another. Therefore, it is crucial to take academic integrity seriously at pre-university levels and consider it an indispensable component of teaching and learning.

One of the best ways to uphold academic integrity is to create a culture of academic integrity throughout the school. This is especially imperative at high schools where students develop their moral identity (Wangaard 2016) because students who act dishonestly at high school will likely behave accordingly in post-secondary education and ultimately be dishonest in familial and professional settings (Stephens 2019). Therefore, it is crucial to let students develop in a school environment where academic integrity is valued and practiced (Wan & Scott 2016). Also, Academic dishonesty can be reduced significantly in schools where a culture of academic integrity is successfully established (McCabe & Trevino 1993). However, creating a culture of academic integrity is not a one-dimensional and straightforward process. Bertram Gallant and Drinan (2006) observe that significant and intentional effort is needed to change the beliefs, values and attitudes of students and faculty to create a culture of academic integrity. Similarly, Wangaard (2016) maintains that a visionary, dedicated and courageous leadership is needed to create a culture of academic integrity in high schools. Building upon the epidemic analogy, Stephens (2019) argues that preventing an epidemic is not just a matter of doctors and scientists working on the topic. It requires a comprehensive, multilevel and systemic approach. Like an epidemic, academic dishonesty is a complex issue involving individual, psychological, situational and cultural factors (Stephens 2016). Therefore, creating a culture of academic integrity to prevent academic dishonesty necessitates a comprehensive and holistic effort (Stephens 2019). Otherwise, undesired consequences are likely to emerge in schools where a culture of academic integrity is absent, and academic dishonesty prevails. Wangaard and Stephens (2011) state that academic dishonesty undermines learning in such schools, invalidates assessment and compromises students' moral identity and development. Saddiqui (2016) also adds that academic dishonesty leads to the disruption of program delivery, create a sense of disaffection and distrust among students and faculty, and damage the reputation of institutions. As can be seen, payoffs of creating a culture of academic integrity at high schools are comprehensive, far-reaching and sustainable. However, pitfalls of academic dishonesty are contagious and corrosive. In this respect, creating a culture of academic integrity at high schools should be among the first priorities of high schools.

To this end, we elaborated on the importance of academic integrity at pre-university levels and creating a culture of academic integrity in high schools. As outlined above, creating a culture of academic integrity is a challenging, long and multifaceted journey. Therefore, it is a worthwhile endeavor to explore the facilitators and barriers of this process. In this respect, this study set out to create a culture of academic integrity at a high school in Türkiye and explore what facilitates and impedes the process. Drawing on the

data, our observations and experiences, we aimed to present takeaways regarding facilitators and barriers to creating a culture of academic integrity at high schools.

Related literature

In this section, the literature review will be presented in two parts. In the first part, academic integrity models or frameworks proposed to create a culture of academic integrity will be introduced. The second part will outline implementation studies on creating a culture of academic integrity. Since academic integrity studies at high schools are relatively scarce, post-secondary level studies will also be included.

Models / frameworks

It is well established that creating a culture of academic integrity requires a systematic and holistic approach (Bertram Gallant & Drinan 2006; Macdonald & Carroll 2006; Morris & Carroll 2015; Saddiqui 2016; Stephens 2019; Wangaard 2016). Although academic integrity primarily depends on the values of individuals, creating a culture of academic integrity is an institutional issue (Whitley & Keith-Spiegel 2001), and it is one of the central missions of institutions (Lathrop & Foss 2005). Also, this is an informed and evidence-based process. Therefore, some scholars proposed models/frameworks to help educational institutions create a culture of academic integrity which are presented below.

Wangaard and Stephens (2011) formulate that "to change individuals we must change culture; to change culture we must change individuals" (p. 7). Their conceptual model for Achieving with Integrity (AWI) strives to promote academic integrity at high schools and is a synthesis of theory and research that has proved effective in higher education. The AWI model is a four-dimensional model with two programs. The first program focuses on promoting academic integrity via a school-wide approach, while the second program adopts a classroom-based approach to improve the ethical functioning of students. The first dimension of the model is *Core Values*. The AWI model suggests sticking to core values (honesty, trust, respect, responsibility, effort and learning) in any circumstances to guide schools through the process. One major concern of schools should be communicating these values clearly and encouraging the school community to embrace these values in all aspects of education. The second dimension is *Committees and Commitments,* which comprises academic integrity committees, pledges and councils. Creating a culture of academic integrity requires the active involvement of all stakeholders at schools. Therefore, the process should be guided by an effective team representing all stakeholders, including influential leaders and team members. In the model, Wangaard and Stephens (2011) provide a wide range of materials, documents, activities and guides that could be used in this dimension. The third dimension is *Culture and Community,* which frames the strategies to establish shared norms, goals and values among students, teachers, parents and administrators. The ultimate aim to be achieved in this dimension is to engage and support the school community through projects and take the initiative to promote a culture of integrity. Three keywords of *Curriculum and Instruction*, which is the last dimension, are mastery-oriented teaching, pedagogical caring and fair testing. In this dimension, Wangaard and Stephens (2011) offer recommendations and strategies to teachers on how they can integrate academic integrity into their courses. The AWI

model offers a very systematic, holistic and comprehensive framework for creating a culture of academic integrity in high schools. Driven by theory, research and field expertise of the researchers, the AWI model constitutes an informed blueprint for high schools that set out to create a culture of academic integrity.

Hossain's (2022) 4P Academic Integrity Literacy Model is based on the systems approach and aims at cultivating a culture of academic integrity at the K-12 level. 4P model takes literacy at the center and strives to foster academic integrity literacy of high school students through a holistic intervention. The 4P in the model represents people, policy, preparation and practice. In the *People* domain, the primary motive is to create a sustainable teacher-friendly and student-centered academic integrity policy and engage all stakeholders at school through teams, committees and materials. The *Policy* domain refers to the effective implementation of the policy to create a positive school culture. The *Preparation* domain is related to planning, documenting and promoting academic integrity literacy throughout the school. In this stage, schools aim to align their educational approaches and resources with the premises of academic integrity literacy education. The *Practice* domain highlights the instructional and observational aspects of academic integrity literacy. Teachers take an active role in this stage and help students develop academic integrity literacy through instructional and curricular interventions. Specifically designed for high schools, Hossain's (2022) model approaches academic integrity from the literacy perspective through the systems approach.

The multisystem model of McCabe et al. (2012) for creating a culture of academic integrity is based on the premises of the ethical community-building approach, which strives to promote academic integrity by deterring academic dishonesty and fostering cooperation among faculty members (administrators, teachers and students). According to McCabe et al. (2012), a culture of integrity can be best understood by exploring the interaction between formal and informal cultural systems within the institution. From this standpoint, their model attempts to create a culture of academic integrity by aligning formal and informal systems of institutions. Formal systems comprise administrative leadership, the selection system, values, policies, codes, orientation and training, reward system, authority structure and decision process, while informal systems are role models or heroes, informal norms, rituals, myths or stories and language. They state that the key to the success of this model is alignment. Formal and informal systems in the institution should be in harmony with each other.

The Four-Stage Model of Bertram Gallant and Drinan (2008) takes its roots from institutionalization theory, which suggests that institutional change starts with initiative, then continues with implementation, followed by stabilization. The first stage of the model, *Recognition and Commitment*, aims to help individuals recognize the problem and create a commitment to address that problem (academic misconduct) through organizational change. Once the problem is uncovered and commitment is ensured, *Response Generation* (second step) is initiated. In this step, other than reacting to the problems in a non-systematic way, administrators generate responses to academic misconduct by paying attention to systemic structural explanations and engage in an intentional change. The third step involves *Response Implementation,* where the goal is not only preventing academic misconduct but also supporting integrious behaviors. In the *Institutionalization* step (fourth step), the expectation is to integrate academic integrity

into organizational routines, making it a stable norm that guides teaching, learning and research. The Four-Step Model of Bertram Gallant and Drinan (2008) shows that creating a culture of academic integrity at institutions is much more than being after minor reforms such as plagiarism detection but requires a systematic and strategic effort.

Caldwell's (2010) Ten-Step Model, which emerged after an integrative review of research, attempts to draw a clear, step-by-step roadmap for business schools on how to create a culture of academic integrity. Built on the notion that understanding and practicing ethical concepts is crucial for business students, Caldwell proposes the following 10 steps to create a culture of academic integrity: (1) Articulation of a clear purpose and mission, (2) Orientation and training of faculty, (3) Explanation and clarification of current policies, (4) Implementation of a realistic process for addressing violations, (5) Attainment of student ownership, (6) Empowerment of students in education and enforcement, (7) Maintenance of dialogue with stakeholders, (8) Refinement of the ethics curriculum, (9) Monitored enforcement and documentation of results, and (10) Evaluation of outcomes and communication of results. Caldwell suggests that the proposed model's success is based on the dynamic involvement of all participants in the organization.

Although models/frameworks designed to create a culture of academic integrity are relatively scarce, many scholars highlighted important aspects of cultivating cultures of integrity. Creating a culture of academic integrity requires a holistic, institution-wide and integrated approach (De Maio & Dixon 2022), necessitates the partnership (Scanlan 2006) and strong commitment (Bretag & Mahmud 2015) of all stakeholders, obligates the design and implementation of effective academic integrity policies (Morris 2016b), and needs clear articulation, fair and equitable implementation of these policies (Eaton 2020). As can be seen, creating a culture of academic integrity is a complex process, and several variables may intervene in this process. The following section presents the studies that document the implementation of creating a culture of academic integrity process.

Implementation Studies

When the implementation studies in the literature are examined, it can be seen that most researchers focus on micro (course or program) or meso (department) level (Eaton 2020) interventions to document or deter academic dishonesty. Very few studies were conducted on the journey of creating a culture of academic integrity at schools. These studies are presented below in chronological order.

Hendershott et al. (2000) report on the state of the academic integrity culture of a mid-sized private university. Their study primarily aimed at identifying the perspectives of school members through a survey and laying the ground for the desired culture of academic integrity. The development of the survey took place in three stages. In the first stage, members of the university community, including students, teachers and administrators, participated in a town hall meeting to discuss academic integrity. In the second stage, individual interviews and focus groups were done with key members and students to explore their concerns about academic misconduct. Based on the data from the first two stages, the survey questionnaire was developed in the third stage the results of which informed researchers about the steps to be taken at the following stages.

The survey results yielded that students did not see themselves as a part of the process. Therefore, the faculty decided to raise the awareness of students first before developing a student-run honor code. Moreover, the faculty assembled an academic integrity committee to develop standards and enforcement procedures. The committee held several meetings to discuss the survey results and monitor the academic integrity climate throughout the school. Also, the committee strived to prepare students for a student-led honor code which the researchers estimated might take several years to develop this policy. The study of Hendershott et al. (2000) constitutes a good example of strategic planning prior to creating a culture of academic integrity. Exploring the school climate before taking action and acting accordingly contributes much to the strategic planning and implementation of academic integrity interventions.

East's (2009) study reviews the current academic integrity culture of an Australian university which already had a well-written academic integrity policy and makes suggestions on how to embrace an integrated approach to academic integrity by aligning policy with teaching and learning practices. East's review unveils that having a well-developed academic integrity policy is not enough to produce the desired impact of academic integrity culture. Rather, educational institutions should adopt an aligned, holistic and constructive approach to cultivate a learning environment that is supported by an academic integrity culture. In accordance with this approach, East suggests that (1) academic integrity awareness should be integrated into the curriculum, (2) the impact of this integration should be measured and documented so that teachers can reflect on what students need to learn, (3) those who deal with academic misconduct cases should be trained, and (4) academic misconduct cases should be handled appropriately.

Stephens and Wangaard (2013, 2016) conducted two studies that highlight the problem of academic dishonesty among high school students and the need for effective solutions to address this issue. They claim that academic dishonesty has turned out to be an epidemic and this could be used to reduce cheating and promote integrity. In this respect, Stephens and Wangaard (2013) prepared and implemented a character education program that aim to reduce cheating and promote integrity among high school students in the USA. The results of this 3-year mixed method study show that creating a culture of academic integrity is a challenge to take on because "a long-standing and well-entrenched culture of cheating is already in place" (p. 175). Such cultural differences are slow and requires a robust and holistic endeavor. Their second study focuses on theoretical and empirical underpinnings of a process-oriented, four-component model approach to promoting students' moral functioning related to academic integrity. In this study, Stephens and Wangaard (2016) explored the effectiveness of Achieving with Integrity (AwI) seminar supported with a teacher professional development (PD) program on creating a culture of academic integrity at secondary schools. They found that AwI seminar and teacher PD contribute to developing moral functioning of students. Taken together, these studies provide important insights into the epidemic of academic dishonesty at high schools and the potential for character education programs to promote academic integrity.

In their 5-year study, Spain and Robles (2011) narratively report on the idea generation, taking action and final output stages of creating a culture of academic integrity through policy development and implementation at a university. With detailed reporting, Spain

and Robles (2011) uncover 'the journey' of creating a culture of academic integrity. The study starts by portraying the current academic integrity climate at the university, which has no unified academic integrity policy nor a systematic approach to handling academic misconduct, followed by thick descriptions of the steps taken to create an academic integrity culture. The steps taken include creating buy-in across the university, forming an academic integrity committee, assessing campus climate, and writing and implementing an academic integrity policy. After five-year monitoring of the academic integrity culture, Spain and Robles (2011) assert that the university's ambitious plan positively changed the academic integrity climate.

The study of Drach and Slobodianiuk (2020) documents the academic integrity culture-building process of a university in Ukraine in line with the national higher education reform movement. Similar to the work of Hendershott et al. (2000), the study of Drach and Slobodianiuk (2020) sets out to propose evidence-based suggestions through a comprehensive survey on how the institution fosters a culture of academic integrity. The survey found that there was a problem in the adherence to the principles of academic integrity, and the university set up a team to address this problem through a project. A comprehensive set of activities such as seminars, training and professional development sessions were delivered as a part of this project. Also, the content of education was updated with a particular focus on the values education. Moreover, a training center was established to foster the academic integrity culture. With a shifting focus from a punitive to an educative approach, Drach and Slobodianiuk (2020) assert that academic integrity is successfully integrated into teaching, learning and research across the university.

All these studies show that creating a culture of academic integrity is a challenging and slow process which requires active participation of all stakeholders, alignment of policy with teaching and learning practices, effective policy development and enactment, and educational approaches. As this review of literature portrays, creating a culture of academic integrity leads to a significant positive change in the teaching, learning and research processes of educational institutions. However, this literature review also reveals that very little is known about the facilitators and barriers of this process, especially at the pre-university levels. Therefore, the present study contributes to the literature by explicitly depicting the journey of creating a culture of academic integrity at high schools and identifying facilitators and barriers to this process.

Methods

Research site

This study was carried out at a state high school in Türkiye. The school accepts 180 students every year based on the national high school entrance exam, which over three million students take every year. Students who manage to enter around 3% percentile in the exam are admitted to the school. The school is a prestigious state school where academic achievement is highly respected. Every year, almost all graduating students get into university, and most qualify to study at top universities. The school did not have an academic integrity policy, nor have they any specific course, guidelines, procedures or practices about academic integrity. Regarding academic misconduct, the school imposes sanctions only for the violations identified in the discipline regulation of the Ministry

of National Education where plagiarism, collusion, fabrication, falsification or contract cheating are not included in the violation list (MoNE 2007). The school has two committees: the discipline committee, which imposes sanctions on students, and the honor committee, which rewards successful students. The operations of these committees are framed by the discipline regulation of the Ministry of National Education. As for an educative approach, the school does not provide any educative or awareness-raising activities to students on academic integrity.

Research design

This study is an exploratory case study combined with a community-based participatory approach and following Stephens' (2016) multilevel intervention model. As Patton (2014) states, exploratory qualitative research is a state-of-the-art choice "in new fields of study where little work has been done, few definitive hypotheses exist, and little is known about the nature of the phenomenon" (p. 503). In this case, very little is known about the facilitators and barriers to creating a culture of academic integrity at high schools. Therefore, exploratory qualitative research is an appropriate consideration to explore the facilitators and barriers of the process. Patton (2014) maintains that in explorative research, detailed qualitative documentation of the activities, products, behaviors, and feelings of participants instead of administering and analyzing standardized instruments produces more interpretable results. As stated before, the present study portrays the whole process allowing those who are interested in the findings to inspect, judge and make their own interpretations. Yin (2008) argues that explorative case studies "should be preceded by statements about what is to be explored, the purpose of the exploration, and the criteria by which the exploration will be judged successful" (p. 37). Within this scope, this study explores facilitators and barriers of creating a culture of academic integrity at high schools and provide a rich description of this process.

We adopted the premises of a community-based participatory approach, which is "a collaborative approach to research … equitably includes all partners in the research process and often involves partnerships between academic and community organisations with the goal of increasing the value of the research product for all partners" (Coughlin et al. 2017b, p. ix). This approach strives for positive and sustainable social change with the participation and collaboration of researchers and community members (Coughlin et al. 2017a). Whitley and Keith-Spiegel (2001) propose that members are more eager to adopt changes that originate from the school culture rather than imposed on them. It is essential to manage the change with the support of knowledgeable others (researchers in this case) in schools where the school members have little or no theoretical background knowledge about the topic. Therefore, the community-based participatory approach is likely to be a working consideration to establish the praxis between theory and practice in the process of creating institutional academic integrity culture. Administrators, teachers and students were actively involved in the conduct of activities and acted as co-researchers in the process.

Lastly, we followed Stephens' (2016) Multilevel Intervention Model for creating a culture of academic integrity. The model comprises three stages, namely school-wide education (SWE), context-specific prevention (CSP) and (where needed) individual remediation (IR). SWE refers to the primary level of intervention targeting all

community members. It aims to provide school members with opportunities to develop knowledge and skills related to academic integrity. SWE initiates an enculturation process, and this process should be strengthened with CSP which refers to initiatives to reduce academic misconduct at a specific course or program. Stephens (2016) claim that prevention here refers to both behavioral and developmental approaches with a positive framing. CSP interventions cover subject specific discussions about the importance of integrity and what constitutes dishonesty. Lastly, IR comes in when SWE and CSP fall short in preventing academic misconduct. IR refers to an immediate and consistent response to academic misconduct with restorative sanctioning to strengthen commitment to academic integrity.

Data collection and analysis

Yin (2008) proposes three main principles for data collection in case studies; using multiple sources of evidence for triangulation, creating a case study database and maintaining a chain of evidence to increase reliability. In this respect, various data collection methods were used (Table 1).

We analyzed the collected data in a variety of ways. We used deductive content analysis to analyze school documents and web content. A priori theme was academic integrity. For the closed questions of the survey, we made descriptive analysis, whereas inductive content analysis was used for the open-ended questions. For the analysis of individual interviews and focus groups, we conducted a thematic analysis based on the six-step framework of Braun and Clarke (2006), which comprises familiarization with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Again, we made deductive content analysis on the field notes to triangulate the interview and focus group data. We voice-recorded the interviews and focus groups. We used MAXQDA software audio file coding feature

Table 1 Data collection methods and purposes

Method	Description	Purpose	*N*
Document analysis	School documents that provide information about academic integrity	To reveal the current status of academic integrity at the school	4
Web and Social Media Analysis	Web page and social media accounts (Instagram and Facebook) of the school	To reveal the current status of academic integrity at the school	3
Survey	A three-question survey that includes two closed and one open-ended question	To reveal the current status of academic integrity and the perspective of students at the school	211
Survey	A four-question open-ended survey	To reveal the ethical decision-making process of students	165
Interview	Semi-structured individual interviews with administrators, students and teachers	To identify the facilitators and barriers to creating a culture of academic integrity at the school	11
Focus Group	Semi-structured focus group interviews with students	To identify the facilitators and barriers to creating a culture of academic integrity at the school	6
Field notes	Retrospective voice recordings related to researcher visits to the school	To support the findings	59

to conduct the analyses of voice recordings allowing us to code interview recordings over soundwaves without transcribing the data.

Positioning ourselves

The corresponding author of this study has been working as a full-time EFL (English as a Foreign Language) lecturer at a university in Türkiye since 2013. Before that, he worked as an English teacher at the K-12 level for four years. He has been involved in academic integrity research since 2020. He is leading Integrity in School Education working group under the European Network for Academic Integrity (ENAI) and a member of several other ENAI working groups. He has teaching experience and a theoretical/practical background in academic integrity at both K-12 and higher education levels. The co-author of this study is a senior researcher at a university in Türkiye and a founder director of his institutional Centre for Academic Integrity and a founder Board member of ENAI. Throughout the research, he maintained his contact with the corresponding author to discuss the implementation of the study.

   We purposefully chose the high school as the research setting for two reasons. First, we believe that sustainable change in academic integrity is likely to be achieved better in pre-university years, and second, the students of this school are high-achieving students with a high intellectual capacity. Since, to the best of our knowledge, this study is the first attempt to create a culture of academic integrity at a high school in Türkiye, we reckoned it would be a better strategy to conduct this research at a high school which has fewer variables (i.e., behavioral, educational, social problems) that adversely affect the process. The corresponding author of this study approached the school administration with the intention of being an insider at the school. In his seminal work, Freire (1982) strongly highlights the importance of being an insider in social studies. Therefore, he wanted to be involved in the process as much as possible without contaminating the natural process. Upon agreement, he spent at least two (sometimes three) days a week at school for one academic year. The school administration strongly embraced the idea of creating a culture of academic integrity and recognized him as the academic integrity mentor during this journey. His responsibility was mentoring them through the process by making suggestions on creating a culture of academic integrity, giving feedback on their initiatives, and supplying them with the necessary theoretical and background knowledge when needed. The school members implemented and managed the activities at school. He kept his involvement at the minimum level on the implementation side so that the school's capacity to carry out the project could emerge. However, he provided a series of seminars at the beginning to introduce the concept of academic integrity to the school community.

Procedure

Thick description in qualitative research contributes to the validity of findings by making the process more realistic and richer (Creswell 2013) and this section narrates the process of creating a culture of academic integrity at the research site in detail covering our reflections and thick descriptions of activities conducted for school-wide education.

Creating buy-in

Before going to the first meeting with the school administration, the corresponding author did preliminary research about the school to make a positive first impression. In informal meetings, he explained the study to people who knew the school principal and got preliminary information about how the principal's approach would be. The school principal flatly refused the corresponding author's proposal of conducting this study at their school. The principal said that since they are an academically successful school, many researchers want to conduct academic research in their school, and they no longer approve such studies on the grounds that they interfere with the functioning of the school. After explaining what academic integrity is, why it is necessary at school, and what this study promises to add to the school, he got interested in the study. The three meetings at the following week provided detailed information about the theoretical and practical aspects of the study to the school administrators including the principal and two vice-principals. In this process, presenting the current status of academic integrity studies carried out on the international scale, showing how neglected this issue is in Türkiye and visualizing the potential outputs and outcomes of the study for the school played an important role in creating the buy-in. After a successful buy-in process for about a week, the school administration invited the corresponding author to the school to plan the details, and we held a process planning meeting with the administrators. In the meeting, we decided to start with policy development and write an academic integrity policy that would guide us throughout the process. As for school-wide education, we planned a set of webinars/seminars and activities to raise awareness of academic integrity. A bilateral agreement between the school and Çanakkale Onsekiz Mart University (COMU) Centre for Academic Integrity was signed to maximize the professional support from academia.

Policy development

Developing academic integrity policies either at the very beginning of the process or after the academic integrity culture is mature enough for the policy is a controversial issue. We went for the former and decided to write an academic integrity policy first. Although the policy is an abstract term, a policy document makes the term visible. The concept of academic integrity (accordingly, academic integrity policy), especially an educative approach to academic integrity, was very new to the school community. Therefore, we believed a well-written policy document would be a blueprint for introducing the concept and guiding the process.

   The authors of this study first developed the Multipronged Academic Integrity Policy Writing tool (www.academicintegritypolicy.com). Then, we set out to write the draft version of the policy by using the tool as a team of seven, including administrators, three teachers and the corresponding author. In several meetings preceding the writing process, they were familiarized with the tool in addition to information about academic integrity culture and the educative approach to academic integrity. The team members wrote the academic integrity policy under the supervision of the corresponding author using the tool two weeks before the start of the academic year. The first draft (26 pages) was ready when the academic year started.

Then, we moved on to the feedback stage. First, we held a seminar for teachers to introduce the draft policy and get feedback. After the seminar, most of the teachers indicated their appreciation but just two of them gave minor feedback (related to wording). We also distributed a copy of the draft policy to the teachers and a link if they wanted to send anonymous feedback. However, no anonymous feedback came. Second, we held a webinar for students and parents to get their feedback. In the webinar, we introduced academic integrity in general, and what academic integrity means at the school via the policy. Similarly, we requested feedback via an anonymous online form. Of the submitted feedback, many were the wishes for effective and equitable implementation of the policy. There were also those who expressed concern that this policy would create a stricter disciplinary environment at school. Based on this feedback, we decided to highlight the educative approach of the school in the policy document and make it more visible. We finalized the policy with a few minor improvements (Additional file 1: Appendix 1).

School-wide education

Stephens (2016) suggests that school-wide education should start before students step into the school. In line with this suggestion, we prepared catchy posters on what academic integrity is, why it is important, and the fundamental values of academic integrity and hung them on the school walls (Additional file 2: Appendix 2). Also, we shared the digital versions of these posters on the school website and social media accounts. We prepared a brochure for newly enrolled students highlighting the importance of academic integrity at the school and including the expectations from students and attached it to the students' enrolment files (Additional file 3: Appendix 3). A copy of the school's academic integrity policy was distributed to students in booklet form.

We utilized the feedback seminar and webinar as an opportunity to start school-wide education and introduced the concept of academic integrity, what it means in the school, and what the expectations of school administration are from students, teachers and parents. Along with this, we collaborated with the school counsellor to organize more seminars for students to help them internalize the notion that academic integrity is not a violation-sanction issue. These seminars aimed to highlight the positive aspects of academic integrity by introducing concepts over hypothetical cases. The school counsellor suggested organizing these seminars for small groups (at the classroom level) like a workshop. Previous experience at the school showed that large group seminars fell short of meeting the intended outcomes. Therefore, we completed the first seminar series in 12 different sessions. In these sessions, we administered a three-question online survey to students to explore their mindsets about academic integrity at the beginning of the session. We used Slido for data collection, which allows anonymous poll voting. The first question asked if they had ever heard about academic integrity, and 62% of the respondents answered 'yes'. The second question asked the first word that comes to your mind about academic integrity. First five words were achievement ($n = 26$), honesty ($n = 26$), school ($n = 23$), cheating ($n = 22$), and discipline ($n = 20$). The last question (after the session) asked whether they agreed with the following statement "I can see that academic integrity is more important than I thought" and 87% of the students responded 'yes' to this question. This mini-survey and our observations showed that students conceptualize

academic integrity from a punitive perspective. However, classroom discussions based on hypothetical cases contributed much to changing their mindset positively.

The second seminar series was about the ethical decision-making process. Again, these seminars were organized at the classroom level and in these seminars, academic misconduct types were introduced to students and discussed using ethical dilemmas. First, we explored the ethical decision-making mechanisms of students with a survey by presenting them with the ethical dilemmas based on academic misconduct types and asked them what they would do in that case. We collected their responses anonymously via the Socrative app. Content analysis of student responses showed that students were more interested in the consequences of actions in their ethical decision-making process (Çelik 2022). The governing notion among students was that if the outcome of an action is good for them, it can be deemed moral. Therefore, this seminar series aimed to teach students to consider virtues rather than consequences or rules in their ethical decision-making processes.

It took almost two months to complete two seminar series. During this time, the corresponding author spent two days every week at the school. Apart from the seminar sessions, he had informal and spontaneous meetings and talks with students, teachers and administrators about academic integrity. He made observations and took field notes. In one of his observations, he noticed that most senior students were moving in front of first-year students in the lunch queue. First-year students were not happy with it, but this has long been a tradition at the school. Later, he learned from senior students that they were doing this because they needed to eat quickly and study for the university exam during the lunch break. He found this as an opportunity to teach ethical decision-making over a real-life example. In seminars, we discussed senior students' actions based on the consequences, rules and virtues. The discussion outcome was that it is not the consequences or rules that make our actions ethical. Nevertheless, we need to rely on virtues when deciding what to do. Classroom discussions on real-school-life incidents appeared to exploit the discussion outcomes to the fullest.

We established an Honor Council during the development of the academic integrity policy, including administrators, subject teachers, school counsellors, parent-teacher association representative and the student representative. The Council monitored the implementation of the policy and managed the awareness-raising activities. One suggestion was to shoot a short movie to raise awareness of academic integrity. One of the teachers leading the school's photography club claimed responsibility for managing the process. An announcement was made for students who wanted to volunteer for the short movie. Four students showed interest and shot an original short movie under the teacher's supervision. The short movie was distributed via the school website, social media channels and classroom WhatsApp groups. Later, the students participated in an international academic integrity video contest with their video and won the Turnitin award. This award accelerated the impact of the video throughout the school and among the parents.

The student representative in the Honor Council proposed to choose the theme of the traditional debate tournament as academic integrity. The Council favored this idea and two teachers who had already managed the debate tournaments in the previous years took responsibility for the process. Sixteen teams (64 students) applied for the

tournament. We helped them write debate questions in collaboration with the COMU Centre for Academic Integrity of Çanakkale. The tournament was completed in one month.

In summary, we aimed to increase the school community's awareness of academic integrity with SWE and help school members develop a positive understanding and attitude towards academic integrity. Based on our observations and anonymous student feedback on the academic integrity policy at the beginning of the term, we deliberately avoided dealing with academic misconduct in a punitive way. Instead, we focused on cultivating integrity as a virtue.

Results and discussion

We analyzed the interview ($n=11$) and focus group ($n=6$) data based on the six-step framework of Braun and Clarke (2006) to explore the facilitators and barriers to creating a culture of academic integrity. We generated five themes as facilitators and five themes as barriers (Table 2).

Facilitators

Theme 1: creating buy-in

Creating buy-in refers to convincing the school community to invest time and effort to create a culture of academic integrity. It is well established that academic integrity policy development and implementation is not achievable without buy-in on the school side (Benson et al. 2019; Burke & Bristor 2016; Moriarty & Wilson 2022; Shane et al. 2018; Spain & Robles 2011; Wangaard 2016). Creating buy-in is essential for sustainable change because people are more eager to adopt changes that originate from the school culture rather than being imposed on them (Whitley & Keith-Spiegel 2001). The school community first should be convinced to change and then take action. As Dufresne's (2004) study shows, academic integrity culture cannot be maintained at schools which do not have sufficient buy-in. From this perspective, we attempted to create buy-in first, as elaborated in the procedure section. Interviews showed that managing an effective buy-in process facilitated the formation of academic integrity culture at the school. The school principal stated that:

Normally, we do not allow scholars to do research in our school as it interferes with our functioning, but your introduction of the topic impressed us.

Table 2 Themes for facilitators and barriers

Category	Facilitators	Barriers
Themes	creating buy-in	deficiencies in responding to academic misconduct
	administrative embracement and support	prioritization of academic success over academic integrity
	activities that promote student involvement	teacher resistance against change
	external expert and school collaboration as praxis	exam-based assessment design
	policy as the blueprint	timing of the activities

This is also mirrored by one of the vice-principals (VP1):

Actually, I didn't know that academic integrity is such a broad concept. I was literally shocked when you presented some statistics related to academic misconduct in Türkiye. It was a great disappointment for me, but I grasped the importance of the topic.

Some teachers also made similar remarks. Referring to our field notes, we can say that the first reaction of administrators and teachers was positive when we first introduced academic integrity. Presenting evidence-based statistical facts about academic misconduct in Türkiye and showing the long-term consequences of academic misconduct played an important role in creating buy-in, leading the administration to embrace the topic and provide full support.

Theme 2: administrative embracement and support

Creating a culture of academic integrity is an institutional issue (Whitley & Keith-Spiegel 2001), and this can be achieved with a multi-stakeholder approach in which stakeholders have certain responsibilities (Kenny & Eaton 2022). Administrators are mainly responsible for developing and implementing an academic integrity policy (Turner & Beemsterboer, 2003) and closing the gap between policy and practice (Bertram Gallant & Drinan 2006). Lack of administrative support undermines academic integrity management at the institutions (Saddiqui 2016). On the other hand, administrative embracement of academic integrity and support for creating an academic integrity culture are significant facilitators. Drawing on our observations and field notes, we can affirm that the school administration was more interested and enthusiastic than we expected. In the interview, the school principal noted that:

We are a school where only academically successful students are accepted, but success does not just mean placing our students to top universities. We want them to be honest wherever they go. And, we want to bring honest individuals to society. That's why we want to give due importance to academic integrity in our school.

In one of the teacher interviews, one teacher (T3) observed that:

This year, our principal mentioned academic integrity in all school meetings. Each time, he strongly highlighted the importance of bringing successful and honest students.

We also observed that the school principal's enthusiasm was genuine. He called us several times to discuss his ideas to promote academic integrity. In seminars and webinar, he made the opening speeches and strongly highlighted how the school administration values academic integrity. He joined some classroom discussion sessions and encouraged students to be a part of the academic integrity culture. It was not surprising for us to see the name of the principal in the word cloud for the question of what the first word that comes to your mind is about academic integrity. Vice-principals were also very positive and helpful in this process. We planned the whole process together, and they always created room for academic integrity-related activities. The school administration's attitude towards academic integrity and support was an important catalyst in the process.

Theme 3: activities that promote student involvement

Student engagement is a crucial element in creating a culture of academic integrity (Bretag & Mahmud 2016), and students play an important role in this process (John et al. 2021). The earlier punitive approaches to academic integrity confined students' role to not violating academic integrity. In this approach, students are seen as moral slackers habituated to cheating (McCabe & Pavela 2000). However, the educative approach to academic integrity regards student involvement as one of the building blocks of academic integrity culture. As this study adopted an educative approach to academic integrity, we tried to maximize student involvement through activities that promote student participation, such as the debate tournament, the short movie, seminars/webinar and classroom discussions. Interview and focus group data show that such activities promoting student involvement can raise awareness of academic integrity. In one focus group, a student (S7) who participated in the debate tournament stated that:

> *To be honest, I didn't read our academic integrity policy when it was first distributed to us. None of my friends did but for this debate tournament, I read it over and over again.*

Another student (S10) in the focus group claimed:

> *There is a great difference in my perception of academic integrity before and after the debate tournament. I did a lot of research on academic integrity to get prepared for the debate tournament.*

Many other student interviewees made similar remarks regarding the positive change in their perception of academic integrity after they participated in the debate tournament. One of the vice-principals (VP2) noted that:

> *I was surprised to see that a student who had a record for violating rules was in the winning team and she/he defended academic integrity quite well. It seems that such activities help them internalize academic integrity better.*

The same student (S13) that the vice-principal mentioned was in the focus group and she/he stated that:

> *Before the debate tournament, I was aware of the existence of academic integrity, but did not know exactly what it was. But, as I researched for the tournament, I realized how important it is. We all know the rules, but this tournament allowed us to reflect on the rules.*

It can be argued that the debate tournament created an opportunity for students to reflect on academic integrity better. As most students stated in the interviews, they had a basic knowledge about academic integrity. However, with the debate tournament, they voluntarily engaged in researching academic integrity, critically reflected on cases in their school and understood the educative side of academic integrity.

The short movie project was another activity that promoted student engagement and maximized the dissemination of the academic integrity concept to a wider community. In this project, students shot a short movie illustrating how academic integrity leads to societal honesty and the short movie was disseminated via the school's social media

accounts. The short movie received 2,333 likes on Instagram (the average like count of the last 30 posts was 502), and 5,335 individuals watched it on YouTube (by the 26th of June 2022). One student (S15) in the focus group claimed that:

> *I never thought that academic integrity would lead to corruption in society, but this short movie helped me see the consequences of cheating in society, not only at school.*

We closely monitored the preparation stage of the short movie project and took field notes. We observed that although four students were involved in the short movie project, their peers and teachers were engaged in the process because they exchanged ideas with their peers and got feedback from their teachers. The Turnitin Award for the short movie doubled the impact of the project throughout the school, and the award encouraged the school administration to invest more time and effort in academic integrity. It can be stated that student involvement in activities is likely to be a strong facilitator of raising awareness of academic integrity across the school.

Theme 4: external expert and school collaboration as praxis

Institutionalization of academic integrity, in other words creating a culture of academic integrity, is a really difficult and complex task (Bertram Gallant & Drinan 2006). As Wangaard (2016) clearly articulates, "creating a culture of academic integrity in any high school requires a visionary, dedicated and courageous leadership team" (p. 444). In this challenging process, high schools might need external help to facilitate the implementation of theoretical knowledge into practice. Research (e.g., Curtis et al. 2022) shows that expert help significantly affects schools' understanding of academic integrity and how to implement best practices in their settings. Such an intervention serves to support establishing praxis, in other words, implementation of practice grounded in theory and research (Miron 2019). The praxis can be achieved with the help and support of knowledgeable others. In our case, the interview data showed that effective collaboration between the external expert (the corresponding author) and the school community facilitated academic integrity culture by implementing theory and research-driven practices. One teacher (T1) highlighted that:

> *This is the way it should be. I saw many projects fail in our school because they were top-down projects that told us what to do and left us alone. But this time, you closely worked with us, and we benefited from your theoretical knowledge a lot.*

One of the vice-principals (VP2) made a similar remark:

> *You were like an insider throughout the process and this made us believe that we could do this because we trusted your expertise which kept us on track. We wouldn't have the same result if this was coordinated by one of us.*

Another teacher (T3) pointed out a different perspective:

> *In time, you (the expert) became the representative of academic integrity in the school. Students didn't know your name, but they knew that you were the academic integrity guy. I think this representativeness was very important.*

This was also echoed by some students in the focus groups. The following excerpts are students' thoughts about expert involvement:

> *Your presence in this process gave me confidence. Our teachers were already talking to us about these issues, but your presence as an expert was more effective. (S13)*
> *If someone from our school had undertaken this, we would still think of it as a teacher's project, but you are from the academy and you are specifically here for this job. So, we took it more seriously. (S13)*
> *When you started walking around the school, everyone asked each other who this guy is, and your presence was an intriguing element. Later, we learned that you are from the academy. This caught our interest because we all want to enter university and you were coming from the university. (S5)*

In eight interviews, the importance of expert involvement and the effectiveness of collaboration were highlighted by the participants. Accordingly, it can be argued that the involvement of an external expert and collaboration with the school community is likely to be a strong facilitator for creating a culture of academic integrity.

Theme 5: policy as the blueprint

Many studies concur that academic integrity policies are essential for creating a culture of academic integrity (Martin & Haeringen 2011; McCabe et al. 2003; Morris 2016a, b; Scanlan 2006; Stoesz & Eaton 2020; Wangaard 2016). The schools with an academic integrity policy report fewer misconduct cases than the schools that do not have one (McCabe & Trevino 1993). Therefore, an academic integrity policy lays the foundation of academic integrity culture. The interviews made it evident that having an academic integrity policy was a facilitator of creating a culture of academic integrity. One of the vice-principals (VP1) stated that:

> *Having an academic integrity policy concretely demonstrated the existence of academic integrity in our school and it was a roadmap for us. It helped us to take academic integrity seriously.*

The other vice-principal (VP2) highlighted the importance of having a policy at the very beginning:

> *Our policy was very well written. It is very important that we have such a policy from a strategic point of view. It was very appropriate to start with a policy that would show us the way and keep us on the road.*

Referring to our field notes, we saw that the policy booklets were all over the school, including the teachers' room, administrators' rooms, the library etc. As the vice-principal noted, it made the concept of academic integrity concrete in the school. During the corresponding author's visits, when he was in the principal's office, other school principals who came to visit the school read the policy document. They wanted to know what it was all about and indicated their interest of doing something similar. Moreover, the District Director of Ministry of National Education appreciated the policy document and said that it should be disseminated throughout the province. Without the policy document, explaining academic integrity to people outside the school might have been

difficult. However, the existence of the policy document attracted the attention of others and increased the visibility of the presence of academic integrity at the school. Therefore, developing an academic integrity policy was likely to be a reasonable and effective choice for creating a culture of academic integrity.

Barriers

Theme 1: deficiencies in responding to academic misconduct

Academic dishonesty is a pervasive problem (Whitley & Keith-Spiegel 2002), and it has long been an epidemic (Haines et al. 1986). Academic dishonesty has corrosive consequences such as undermining student learning, invalidating assessment and hindering students' moral development (Stephens 2019). Therefore, schools' ability to respond to academic misconduct cases plays an important role in creating a culture of academic integrity. However, responding to academic misconduct is not a matter of applying 'quick fixes' (Morris & Carroll 2015). Rather, dealing with academic misconduct cases requires effective strategies (deMontigny 2022). Interviews and analysis of school documents revealed deficiencies in responding to academic misconduct are a significant barrier to creating a culture of academic integrity.

One sub-theme here is legal gaps. All public and state schools in Türkiye are governed according to the regulations of the Ministry of National Education (MoNE). The Regulation on Secondary Education Institutions prescribes four sanctions against academic integrity violations: reprimand, temporary suspension, school change, and expulsion from formal education (MoNE 2013). All violations that require these sanctions are clearly stated in the regulation. However, prevalent academic misconduct types such as plagiarism, fabrication, contract cheating etc., are not included in the regulation as a violation. This poses a significant threat to deterring academic misconduct because school administrations cannot impose sanctions that are not articulated in the regulation. The school principal stated that:

> *There is a gap in the law about this issue. Such violations [plagiarism] are not included in the regulation. There's nothing we can do about it.*

One vice-principal (VP1) also noted that:

> *Sanctions are prescribed for only cheating in the regulation. I think the regulation should be updated based on academic integrity. National regulations are not suitable for deterring academic misconduct.*

We also observed that there was no awareness of plagiarism throughout the school among students, teachers and administrators. When the corresponding author randomly checked student assignments, he saw many evidences of plagiarism in student papers. However, this was not a concern for teachers because plagiarism has never been a problem in the school (from the interview with an EFL teacher [T1]). Regarding academic misconduct, much of the focus is given to exam cheating. The school is very strict about exam cheating due to the test-based assessment design. There is likely a dichotomous relationship between the lack of awareness of plagiarism and not including plagiarism as a violation in the regulation. It can be argued that the plagiarism problem in secondary education is not visible and mature enough to be discussed on a legal basis in Türkiye.

The second sub-theme of this section is individual responses to academic misconduct. Academic integrity policies stipulate a unified approach to academic misconduct. This is one of the core elements of an academic integrity culture. However, for several reasons, teachers refrained from reporting the cases to the academic integrity council and produced their individual solutions to such cases. It was obvious that different approaches of teachers in responding to academic misconduct were likely to undermine academic integrity. This was also echoed by many students in the interview. One student (T1) stated that:

> *Our teachers do not behave in the same way about exam cheating. I don't want to give names but some of our teachers do not proctor us in the exams and ignore cheating. But some are very strict about cheating.*

The school counsellor made a similar point:

> *During exams, I noticed that some teachers just look at their mobiles while some others proctor carefully. The problem is that when students notice this, they start thinking that it won't be a problem if I'm not caught. So, they behave according to the proctor teachers.*

We also asked teacher participants why teachers might not want to report misconduct cases as described in the policy. A teacher's (T1) response was:

> *There are teachers who report cheating cases to the school administration, but many solve these issues by themselves because they either don't want to deal with the process or believe that students will somehow get away with it. Also, student assignments are not evaluated thoroughly. Most of our friends just grade the paper numerically and that's all. So, misconduct does not emerge.*

Another teacher (T3) made a remark supporting this notion:

> *Some teachers grade assignments in just two hours, while for some, it takes two days. There is an injustice in grading assignments.*

From our field notes and interview data, it was obvious that violations and sanctions in the policy were neglected. Only the exam cheating cases and some behavioral problems were reported to the school administration, and sanctions were imposed for these violations. As Jendrek (1989) suggests, having a well-written academic integrity policy does not guarantee that the school community will comply. The reluctance of the school is essential for a unified response to academic misconduct, which can be achieved with the effective implementation of academic integrity policies (McCabe & Trevino 1993).

Theme 2: prioritization of academic success over academic integrity

In recent years, demand for productivity has increased for students and schools, making academic success important for students by maintaining a high grade point average (GPA) (Tippitt et al. 2009). This demand might lead to pressure for success at all costs. It is likely that, in some cases, academic success is valued more than academic integrity (Houdyshellm 2017), and in such cases, academic misconduct can be a norm. In the Turkish education system, entering a university is a big challenge and competition for

students. Every year, more than two million students take the national university exam. Students' GPA score is added to the exam score, which ends up in grade inflation, especially in private schools (Kayip & Kartal 2021). Entering a university is important not only for students but also for schools as they boast with the number of students who enter a university. Therefore, academic misconduct can be discussed from the perspective of students and the school. Referring to our field notes, we can say that academic success is highly valued at the research school. The school is renowned for its productivity in placing almost all students to a university every year. We did not observe prevalent grade inflation. However, there were instances. In the 10th class, students choose a branch such as natural sciences, social sciences, literature or foreign languages. In this system, the corresponding author witnessed the tendency to classify courses as "important" and "less important" according to their branch. For example, philosophy is a "less important" course for natural science students, and academic misconduct may be tolerated in such courses. In the final match of the debate tournament, one student raised a widely used strategy in the school. Students have the right to demand an assignment, called performance work, from the courses they take. They tend to take these assignments from "less important" courses and submit a plagiarized (copy-paste from the internet sources) paper. Since, this is a "less important" course, the teachers award a high grade to students because it is not welcomed to decrease the GPA of students with low grades from "less important" courses. This was also mirrored by a student (S8) in the focus group interview:

> *The purpose of some performance work assignments is not to evaluate learning but to increase our GPA. But the assignments in our subject courses are challenging.*

One teacher (T3) also noted:

> *In most schools, academic success comes before academic integrity but in our school, we almost have a balance. But of course, there are problems. I remember a case in which a student's misconduct case was tolerated because she/he was a successful student with a high potential to enter top universities. The school administration didn't want students to have a record in her/his file.*

Another point supporting this theme was that senior students' absence is tolerated by the Ministry of National Education. I witnessed that senior students did not come to the school one month before the national university entrance exam; instead, they studied at home. This is not a legal practice. One of the vice-principals (VP1) claimed that:

> *Although it is not legal, every year, we get a notice from MoNE to tolerate senior students' absences.*

This is a very widespread practice in almost all schools in Türkiye, not special to the research school. The unusual point here is that the inappropriate directive comes from upper management. This can be shown as an example of how prioritizing academic success undermines academic integrity.

Theme 3: teacher resistance against change

Teachers play a crucial role in creating cultures of academic integrity by inspiring a commitment to academic integrity (McCabe & Pavela 2004). The consistency between teachers' actions and policies contributes much to the actual implementation of academic integrity (Gottardello & Karabag 2022). On the contrary, it is agreed that teachers' behaviors and attitudes can undermine academic integrity and hinder the effective implementation of academic integrity policies (Hamilton & Wolsky 2022; Haq et al. 2020; Saddiqui 2016). Sustainable changes require active participation of all community members (Coughlin et al. 2017b). Therefore, teacher resistance to the implementation of academic integrity policy is likely to be a significant barrier to creating a culture of academic integrity. During our observations, we found that teachers were the less interested among the other stakeholders (administrators and students). Among the 60 teachers, 10 teachers volunteered to coordinate or take part in academic integrity activities. Few teachers gave feedback about the academic integrity policy, and none reported a misconduct case to the academic integrity council. As stated in the previous theme, teachers continued to give individual responses to academic misconduct and failed to implement the academic integrity policy. After analyzing interview data, we identified two sub-themes that are likely to lead to teacher resistance to implementing the academic integrity policy. The first sub-theme is that teachers refrain from the workload. It was established by several studies that teacher workload is an important barrier to upholding academic integrity and responding to academic misconduct (Bertram Gallant 2018; Crossman 2019; Hamilton & Wolsky 2022). One EFL teacher participant (T2) claimed that:

> *I have 60 students in two classes. Our classes are crowded which makes it difficult for us to check all student papers for plagiarism. Plus, we have lots of extra teaching workload in the background.*

The school does not use text-matching software to help teachers check for plagiarism in student papers. Teachers with a graduate degree (two MA and one PhD) were aware that using a text-matching tool is a must; yet, as the school is totally funded by the MoNE, it has no funding for such services. One of the vice-principals (VP1) noted that:

> *A teacher evaluates around 70 performance works in one term. We don't use a text-matching tool, so if they want to check plagiarism, they need to search on Google, but none of our teachers does this because this is a huge workload.*

Two teachers pointed out the problem of workload in reporting academic misconduct cases. In my informal conversations, some teachers also highlighted this issue. Some teachers refrain from filling in case reporting documents, engaging in discussions with parents and participating in meetings. They see this process as time-consuming, so due to this workload, they may skip the misconduct cases they witnessed or produce their individual responses.

The second sub-theme that leads to teacher resistance is the beliefs and misconceptions of teachers about academic integrity. Personal beliefs or misconceptions of teachers result in not implementing academic integrity policy or rejecting the culture of

academic integrity. Interviews and our field notes reveal that teachers have the following beliefs and misconceptions about academic integrity. Some teachers' beliefs were:

- There is no point in reporting misconduct cases because students will somehow get away with it.
- The national education system should change; otherwise, whatever we do won't work.
- Dishonesty comes from families and society, so we cannot do anything about it.
- Every teacher should act in the same way, but this is impossible.

Some examples of teacher misconceptions were:

- Academic integrity is related to academic research.
- Academic integrity is related to citing works in a paper.
- Academic integrity is applied only in English classes.
- Academic integrity is about punishing students who violate rules.

Such beliefs and misconceptions cause teachers to resist to adapt the culture of academic integrity.

Theme 4: exam-based assessment design

Adopting an authentic assessment design has clear implications for reducing academic misconduct and upholding academic integrity (Bertram Gallant 2017; Egan 2018; Ellis et al. 2020; Morris 2016a). On the other hand, poor and uniform assessment designs are more likely to lead to violations of academic integrity. As noted earlier, the most common and dwelled-upon academic misconduct type in the school is cheating in exams. The main reason for this is that the assessment is mainly made by exams. Students take three exams for each course in one term. Apart from exams, they take a performance work and a project work for the courses they choose. However, these assignments are not authentic assignments and, as noted earlier, are given to increase the GPA of students. As we learned from students and teachers, some examples of the topics of such assignments are writing a summary of a book, writing an informative essay about a famous writer or philosopher, solving a number of math problems etc. As such assignment topics far from being authentic, they are very easy-to-plagiarize. In such an assessment design where exams are central to the evaluation of student performance, and assignments are given to increase student GPA, misconduct forms other than exam cheating, especially plagiarism, remain obscure. However, authentic assessments are essential tools to help students embrace the fundamental values of academic integrity, such as honesty, respect and responsibility (ICAI 2021).

Theme 5: Timing of the activities

Stephens (2016) suggests that awareness-raising activities on academic integrity should start before students step into the school campus and continue throughout the year. However, drawing on our experiences in this process, we observed that timing is almost equally important as what is done. Poor timing of school-wide education may become a

barrier in the process and reduce the intended outcomes of activities no matter how well they are prepared. One of the main problems we experienced in this process was scheduling the activities. The school administration made a great effort to create room for activities by aligning teachers' and students' schedules. The exam weeks were extraordinary weeks when all students just focused on the exams. So, in these weeks, no activities were conducted. Also, the days after the last exam (approximately three weeks before the end of the term) are not suitable for activities in that most students do not come to school and are not in the mood to participate in school-related activities. This was also echoed by a student (S4) in the focus group:

> *I think the activities should be made at the beginning and in the middle of the term because through the end of the term, we lose our concentration and don't want to engage in activities.*

It is essential to schedule the activities at the beginning of the term and decide on the dates that potentially maximize student involvement.

Conclusion

In this study, we attempted to explicitly portray the one-year journey of creating a culture of academic integrity at a high school in Türkiye and identify the facilitators and barriers of the journey through the interviews and our field notes. Since creating cultures of academic integrity requires a holistic (Stephens 2019) and multi-stakeholder (Kenny & Eaton 2022) intervention, we adopted a community-based participatory research approach to integrating the school community into the process as co-researchers. We started by writing an academic integrity policy using the online tool we developed. During the development of the policy, we adopted an educative approach and attempted to implement the policy throughout the year. At the end of the year, we conducted individual and focus group interviews and identified five facilitators and five barriers to creating a culture of academic integrity. The facilitators were (1) creating buy-in, (2) administrative embracement and support, (3) activities that promote student involvement, (4) external expert and school collaboration as praxis, and (5) policy as the blueprint. The barriers were (1) deficiencies in responding to academic misconduct, (2) prioritization of academic success over academic integrity, (3) teacher resistance against change, (4) exam-based assessment design, and (5) timing of the activities.

There is no well-framed definition or description of what having a culture of academic integrity looks like. However, it was widely argued that having an academic integrity culture means adopting an educative approach to academic integrity which leverages teachable moments rather than penalizing students (Bertram Gallant 2017), encouraging and ensuring the engagement of every layer of the school (Hendershott et al. 2000), sticking to commonly accepted set of standards (Hudd et al. 2009), and last but not least, showing strict commitment to fundamental values of academic integrity (honesty, trust, responsibility, fairness, respect, and courage) at all costs (ICAI 2021). Certainly, achieving this is not an easy task, and it might take years (Hendershott et al. 2000). However, as a Chinese proverb goes, "a journey of a thousand miles begins with a simple step" (Keyes 2007, p. 107). This study was the first step taken to create a culture of academic integrity at the research school. Drawing on our observations, interviews, field notes

and facilitators/barriers, we can conclude that we were successful in raising awareness of academic integrity throughout the school. However, we are still very far from integrating academic integrity into the school culture and effectively implementing the academic integrity policy. This is understandable because Stephens (2016) notes that creating a culture of academic integrity requires addressing the complex interaction between individual, biological, psychological and cultural factors. This refers to a comprehensive social transformation which is time-and-labor intensive. Achieving this transformation will probably take several years but we ignited the flame for the transformation with this study. On the last day of the school, we had a final meeting with school administration, and we presented our report regarding our achievements, failures, facilitators and barriers. They demonstrated their strong will to continue collaboration in the next year and school principal suggested working on a strategic plan for a sounder implementation of the policy. From this standpoint, we can claim that this study helped raise awareness on academic integrity throughout the school, which ultimately led to the aspiration of creating a culture of academic integrity.

As stated earlier, creating a culture of academic integrity is a journey, and the thick description of this journey proposes significant takeaways for readers. In this study, we tried to portray the journey explicitly and identified the facilitators and barriers with an evidence-based approach. Within this scope, we can propose some takeaways for high schools which set out on a journey of creating academic integrity culture:

- Creating buy-in is an essential catalyst for creating a culture of academic integrity. The school community's aspiration, especially administrators', plays a decisive role in the success of the process. A well-planned buy-in effort can be the first step in creating an academic integrity culture.
- Getting full support from the school administration is another key point. The school administration should embrace the idea of creating a culture of academic integrity and explicitly provide full support.
- An educative approach to academic integrity strives to raise awareness of students through activities that promote student involvement. Students are more likely to internalize academic integrity when they engage in academic integrity-related activities. Such activities allow students to be active researchers about academic integrity rather than being passive receivers of knowledge.
- In schools where the concept of academic integrity is very new to the school community, getting external help from academic integrity experts plays a vital role in establishing the culture. Expert-school collaboration enables taking actions grounded in theory and research. In cases where expert involvement is not possible, schools should seek collaboration from higher education institutions or academic integrity centers.
- Having an academic integrity policy is not a prerequisite for having a culture of academic integrity, but an academic integrity policy is likely to facilitate establishing a culture in that it serves as a concrete representative of academic integrity at the school and also acts as a blueprint that guides the process.
- Adopting a unified approach to responding to academic misconduct is vital, but it is quite challenging to achieve this. The deficiencies in responding to academic mis-

conduct are context-specific. Therefore, revealing the context-specific barriers may signal school administration on what to work.

- Prioritization of academic success over academic integrity leads to the normalization of unethical behaviors at the institutional level and undermines academic integrity culture. Schools should devote themselves to bringing up successful and honest students without putting much emphasis or value on one than another.
- Teachers are among the key stakeholder in the implementation of academic integrity policy and maintaining the academic integrity culture. It is very much likely that teachers can demonstrate resistance to this cultural demonstration. School administration should act delicately to mitigate teacher resistance.
- It is well established that adopting an authentic assessment design has clear implications for reducing academic misconduct. In exam-based assessment designs, the only visible academic misconduct is exam cheating. Also, putting too much emphasis on exams in the evaluation of students' performance can make take-home assignments "less important", and students are likely to plagiarize, and teachers do not monitor plagiarism in such assignments.
- Poor timing of activities curbs the realization of the intended outcomes. The activities should be scheduled carefully so that the students can make the most of them.

Creating a culture of academic integrity is an institution-specific journey. However, this journey can be easier and more effective when informed by the experiences of others and best practices. From this aspect, the takeaways of this study may provide food for thought for schools that embark on creating a culture of academic integrity.

Abbreviations

ICAI	International Center for Academic Integrity
ENAI	European Network for Academic Integrity
AWI	Achieving with Integrity
PD	Professional Development
MoNE	Ministry of National Education
SWE	School-Wide Education
CSP	Context-Specific Prevention
IR	Individual Remediation
EFL	English as a Foreign Language
COMU	Çanakkale Onsekiz Mart University

Supplementary Information

> **Additional file 1: Appendix 1.**
>
> **Additional file 2: Appendix 2.**
>
> **Additional file 3: Appendix 3.**

Author bios

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Authors' contributions

ÖÇ and SR designed the study. ÖÇ and SR prepared materials. ÖÇ conducted school-wide education and data collection. ÖÇ and SR analyzed the data. Paper written by ÖÇ; reviewed, revised and finalized by SR. The authors read and approved the final manuscript.

Availability of data and materials

The data will be made available on reasonable request.

Declarations

Competing interests

Theauthors state no conflict of interest.

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