

# EDUCATION 2.0

CHRONICLES OF TECHNOLOGICAL  
AND CULTURAL CHANGE IN EGYPT

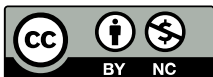
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# 26. 'Survival of the Fittest': A High School Student's Perspective on Learning, Ethics, and Why Students Cheat

*Linda Herrera*

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## Abstract

This chapter profiles 'Gamal', a member of the historic class of 2021. He belongs to the first cohort of students who began high school under an ambitious reform agenda that included the digital transformation of many aspects of learning and assessment, combined with the disruptions of the COVID-19 pandemic. Gamal reflects on the unprecedented if somewhat chaotic first years of the national reform. He explains how the figure of the Minister Tareq Shawki, an unconventional and passionate official who always touted his love for science, had a profound influence on him. He recalls the grueling year of isolation during the pandemic, and the highly competitive environment where a 'survival of the fittest' environment prevails. At the same time, he explains how students engage in acts of social solidarity through sharing materials and techniques for cheating on assignments and exams in a system they view as arbitrary, degrading, and unfair.

## Keywords

COVID-19, cheating, competition, education reform, electronic exams, ethics, science, Thanaweya Amma, tablets

## I. Introduction

In 2023, ‘Gamal’, an undergraduate Computer Science student in one of Egypt’s private universities, stumbled upon the YouTube channel of the Education 2.0 Documentation Project that I manage.<sup>1</sup> Since the time he was a freshman in high school, he had been closely following news of the Minister of Education and Technical Education Tarek Shawki (2017-2022) and was interested to discover that someone had been documenting the Education 2.0 reforms that so deeply informed his high school years. He reached out to me through social media with the message (excerpted):

I was a student in the class of Thanaweya Amma 2018, the first class that went through the new system Education 2.0. I am now in my third year of university. During school, we were split into two groups about the Minister. There were ‘pro-Tarek’ and ‘anti-Tarek’ camps. Both groups would always get into arguments about whether his new policies were good or not. What I always said to my friends was that Dr. Tarek gave us something more important than a new education system. He gave us a role model in perseverance and in passion for science. He set up high educational standards. I am now a scientist only because of his inspirational effect on us students.

Never wanting to miss an opportunity to explore the student perspective, I replied by thanking him and asking if I could interview him, and he agreed. I was in Egypt at the time, and we arranged a meeting time and place.<sup>2</sup> I did not know what to expect or even if I would use anything from that interview, but thought it could not hurt to hear him out. What I encountered was a highly thoughtful young man of twenty-one years at the time, with a great deal of perception and self-reflection; someone who thinks deeply about learning, ethics, and the system of education that has shaped him and everyone who

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1 The YouTube channel, established in 2020, features a series of Oral History highlight videos with key figures involved in Egypt’s Education 2.0 reform, and edited excerpts of press conferences and media appearances by the Minister of Education and Technical Education, Dr. Tarek Shawki (2017-2022), among others, <https://www.youtube.com/@education2-Egypt/videos>.

2 The initial interview of two hours took place on 9 September 2023 in Cairo, with two follow-up discussions in 2024.

passes through it in complicated ways. He had been paying close attention to not only Dr. Tarek's attempts to change and reform the system, but also the reasons for some of his 'failures'.

Our three talks over the coming year, reminded me how valuable and necessary it is to understand and consider student perspectives. We agreed from the start on his anonymity so that he could speak freely. 'Gamal' is a pseudonym, and I have removed any identifiable features. For context, Gamal attended a boys' private high school founded in the early part of the twentieth century with instruction in English and Arabic. The school caters to the professional middle and upper middle classes. (For the perspective of a female student from a public high school from a more modest background, see Chapter 24 in this volume). The interviews were conducted in English and edited for clarity and flow.

## 2. A New Kind of Minister

*LH* You started high school in 2018, an historic year when tablets were distributed to all students entering Grade 10 for the first time. The Ministry started a process of digitizing things like exams and learning resources. What did you think about these initiatives at the time?

*G* In 2018 when I started high school, all the media was talking about Dr. Tarek and the tablets. This made us feel special. Everyone in my class was just buzzing about this. We also heard that this new Minister was supposedly going to bring different kinds of technology into education and that everyone needed the tablet to have equal access to the resources. This is the equal opportunity principle. Whether this change was positive or negative we did not know, but it was a shift, the first change in many years.

At first, a lot of people saw this as a joke and did not take it seriously. When we asked our teachers, they told us that this man was just ranting about some unrealistic dream. But then I started looking into it. I searched YouTube for Dr. Tarek Shawki. I used to do this kind of research a lot. The first thing that came up was his TedTalk in Cairo from 2015 (Shawki 2015). Everyone got to know him through that video. In another video of a big public event with the President, he was talking

about bringing passion back to learning. He was saying that life is not about getting a degree and hanging it on the wall (Shawki 2016a and 2016b). That's the same event when the President asked him to be the Minister of Education. You do not usually see people talking like that in the government. Dr. Tarek seemed different. It was inspiring to see a man his age who was still excited about science and learning. I thought okay, this Minister is genuine. His motivation is genuine. He has high standards in science.

After he became the Minister, the media was doing constant interviews with him. He always said that if you wanted to know what they were doing with the new education system, you should listen to the Ministry directly. By that, he meant people should listen to him, the Minister. I thought, 'Okay, I'll hear it from you'. Every night I would go on YouTube and watch the videos with him from that day. He was like a figure. He was someone you could look up to and say, 'Man, I want to be like that'. I was sixteen in 2018, and I had all the excitement of a little kid. I felt I had a chance to be exceptional and to stand out in this new system.

*LH Did your classmates share your enthusiasm for the new Minister?*

G There were two groups at my school, one 'pro-Tarek' and the other 'anti-Tarek'. The anti-Tarek group was in the majority, and they were more aggressive in their opinions. They thought that by applying this new system, Dr. Tarek might ruin their futures. They thought the man was delusional. Our teachers were also saying that he was not for real. All my instructors gave me a hard time just because I supported the man, because I used to stand up for him. I told them they should watch his talks and hear what he had to say. I told them they were spreading misinformation. A lot of people, especially the teachers, thought I was mad for supporting the new system. They said this Minister wasn't there to help us, but to help the government. They thought the government wanted fewer people to enter university and he was there to make the Thanaweya Amma exam harder. This was the kind of speculation going on about what motivated these changes.

### 3. Tablets

*LH How did you and your classmates react when the tablets arrived at your school?*

G Even though we started the year in September (2018), the tablets didn't arrive until November for public schools, and later for private schools like mine. This was the first thing that failed in the new system. Dr. Tarek made it clear that the change was not in the tablets or the technology on their own, but in the new method of evaluation and the new exam questions. We were supposed to take electronic exams in the fall but instead, the first semester exams were on paper. The electronic exams did not start until spring of 2019. So, if you are about to launch a new product and the first thing that happens is a failure, everyone who said that you were going to fail thinks they were right.

But when the tablets finally arrived, we were excited. This was an exciting piece of tech that we took from the government for free. It was like a toy. It was fun. Our teachers did not interact very well with the tablets at first, which was normal. It was going to take time. Some students used to play pranks on the teachers. For instance, when the teacher was explaining something, some students would use the tablet to play music. We also learned to set up movies on the tablet (which required hacking it). This happened after the controversial decision to not take student attendance in high school.

Most of us took private lessons anyways and did not go to school. Attending school was redundant. School became a place either for the ones who did not like going to private lessons or for students, like my friends and me, who wanted to meet each other. We came to school to just hang out. My group of friends would all gather in the last bench in the class, put in our earphones, and watch movies. The teacher would be doing whatever and we would just be having a watch party. This was us 'hanging out'. If the instructor wasn't strict, he wouldn't say anything. So, yeah, that was cool. It was fun back then.

*LH What are some of the movies that you watched?*

G We watched Spider Man and all the Marvel movies, the Avengers, and some Arabic movies, stuff like that. Everyone had their tablet in front of them with a movie on it. One guy might be watching one movie, while another guy was watching a different one. It wasn't always a watch party where we watched the same thing.

*LH Dr. Tarek talked about how he wanted the tablets to be used by high school students as a tool to access the EKB which was installed on the table, and for the electronic exams. Did you use the EKB app?*

G I used the EKB mainly in the third year (Grade 12). All of us did this. We explored it in the first two years, but not in an intensive way. Some classmates did not care about it. For us it was a cool platform with a learning management system which they brought when we were in Grade 11 (in 2019/2020 during the pandemic). At first, I thought it was fun. It taught us how to search and how to depend on ourselves and all of that. It helped me when I got to the university.

*LH As a third-year university student now, do you use the EKB?*

G No, not really. I used the EKB in a few English courses in my university, but my domain is more YouTube than the EKB. But the EKB does give me access to some scientific papers that I would not otherwise be allowed to view unless I paid money. Even though I use a different digital library provided by my university, a lot of my friends studying languages, management science, and people doing research in science domains, use the EKB on a regular basis.

*LH What did you do with the tablet after you graduated?*

G It is just sitting there at home. I do not do anything much with it. I used it for a while like a Kindle, to download the PDFs of books, stuff like that. But since we have a Kindle now, I just read on the Kindle instead. Some of my classmates sold it and got some money for it. A lot of my friends and I have our own laptops, so we do not need it. But I think students, like ones in Upper Egypt as Dr. Tarek talked about, benefitted much more from the tablet since it helped them access various resources for the first time.



#### 4. A Culture of Cheating?

*LH* During your first semester of high school, the end-of-term exam was leaked. How did the Minister deal with this crisis?

*G* It's true that at the end of the fall of 2018 before the tablets arrived, the exam got leaked. The day before the exam, people sent it to each other on WhatsApp and all sorts of social media. We took it as a joke and a lot of people cheated. And what did Dr. Tarek do? He released a public video on Facebook (Shawki 2019) and said, 'We know the exam got leaked. We are not going to do anything about it. But we know'. Usually, a leaked exam is a big deal, but he was saying, 'If you really want to cheat, go ahead, cheat. But what will you do in Grade 12 when things get real? And why are you depriving yourself of learning?' For us, this was like someone playing with us. It was the first time we saw something like this coming from the government.

*LH* Dr. Tarek said early on that the tablet allowed the Ministry to administer exams without the 'touch of a human hand'. His intention was to curb cheating through technological means. Do you think he succeeded in this?

*G* There was so much cheating using the tablets. Dr. Tarek had his ideas and his vision, and that was something virtuous. But the new exams should have waited until the time was right and the tools were set. The first exams on the tablet (2019) were a mess. They were a physical and technical mess.

For the first time, the Ministry was using the 'open book' concept. The rule said you could come to the exam with the official textbooks but no other books. We could bring these books into the exam hall. The thing was, we used a lot of books for the same course. For example, we had external books and private instructors' books. Why were we allowed to only bring the Ministry's textbook? We did not agree with this rule. A lot of students brought in external books anyway. What happened was the Ministry blocked everything on the tablet, but we could still access and download files through the Chrome browser. I am talking now about the first semester of Grade 11 (2019). We found a way to bring in external books through web sharing. A popular hack was to make notes from the external books, take pictures of them, and

turn them into a PDF file which then could be transferred to the tablet. A lot of people were sharing these files which became a nationwide thing.

*LH Were the exam proctors aware that students were accessing books and notes that were not allowed during the exam?*

G I went to a strict private school. Our teachers care more about virtue than about science, and they did not let us cheat. But we took some exams with the tablet at a public school because it had a server room approved by the Ministry. The exam proctors were from the public schools, and most of them were not strict, not professional, and not ethical. The exams were a joke. Most of the students were cheating.

When we had to take the exams at our school, a lot of people thought this would be a disaster because they could not 'cheat', and by this, I mean access the external books and notes. This meant everyone actually studied. Another thing to consider is that this was the first time we faced an exam with the new types of questions. We found them to be very hard questions, very critical. I left the exam hall saying to my friends, 'These questions are going to be a problem next year' (in the Thanaweya Amma).

*LH How were the new exam questions different?*

G In this new system, every question is critical. The questions test your critical thinking skills. They are checking if you're smart or not. This became an IQ exam in the end, which is not a good thing because life is not like that. This new system was not rewarding those who work hard, it was rewarding those who are intelligent. You might ask, well, what's the difference? Imagine you have a question, and you memorize the question. This shows that you worked hard. You might not be smart as in having a high IQ, you just worked hard to memorize the question. We learned that we were not prepared for this new approach since we could not learn through memorizing. We wondered what we were going to do. Then came the coronavirus. That changed everything. Exams during the year (Grade 11) became meaningless, a joke, because they were online. Everyone talked with each other to solve the questions during the exams. It was as if there were no exams at all.

## 5. Preparing for the Thanaweya Amma during the Pandemic

*LH The third year of high school, Grade 12, is a critical time when students are preparing for the high stakes Thanaweya Amma exam. How did you approach the year?*

G Everyone knows that the third year is the most difficult, the most decisive. It is the year that decides our future. It is also the prison you have to enter for a year. I spent three full days before starting the year thinking about what I wanted to do. I found that science was the only thing that would lead me to doing something good, something virtuous. I am good at sports, but that's not something that would really benefit anyone, it's just entertainment. I thought that if I wanted to excel at something, it had to be science. So, for my exams I picked Biology, Chemistry, Physics, all the science domains. I even took a free online course in Computer Science from Harvard university because I thought Computer Science would probably be the field I would get into. Everyone was surprised that I was taking a course not related to the Thanaweya Amma exam. The question going through my head was, 'Will I succeed?'

*LH What was it like to start that critical last year of high school during the pandemic?*

G This was a disaster because we had to stay home for months on end. In normal times, we would have stopped going to school and spent the year in private classes—seven courses, three-hour lectures, seven days a week. That's one subject per day, the homework, and all of that. But when we entered Grade 12 it was different because of COVID-19. Most of the famous private instructors decided they were going to hold their classes online. We did not have the option to go physically to a class. At first, we were like, okay, that's cool, because at least we have more time to study. But all of us overlooked the most crucial thing, and that's the social element. When you go to a class you get to talk to people, laugh with your friends. Online there is no interaction, meaning there is no emotion, meaning you are a robot. And that was horrible. The first week passed online, then the first

month, and it kept going. There was that moment when you realize this is going to be your life for the rest of the year. It started feeling like a prison. Everyone was having their own kind of breakdown. Not a single person that year did not have a breakdown. It was just a matter of when. Everyone was depressed. I saw friends going through breakdowns and it wasn't easy.

*LH How did you handle the isolation of the pandemic?*

G Personally, I stayed home for six months. One day I had enough. I called my friends and said we have to go out. They were like, 'Yeah, screw this. Okay, let's go out'. This was a group from school who were hardworking, at the top of the class and all that. So, we went to this café to hang out for the first time in months. That was 11 March. Little did we know that three of us from the group would get the virus, including me. That was a comedy, a black comedy. This was the only time we went out and this thing happened.

One of my friends thought he gave the virus to us because he went in-person to a private class. He called to say he was really sorry. I was like, 'Oh no, don't worry. It is just that my future is ruined, but don't worry'. I had the real coronavirus. I was in bed crying out in pain. I couldn't move, couldn't walk, couldn't do anything. The only thing I wanted to do was just sit and study. But I couldn't sit because my back hurt. Everyone in my family was worried as hell. March turned to April, and I still had the virus. Ramadan came and I started really questioning things. What was this, to be imprisoned in a room, in the same room for seven months, not knowing when it would end? It was hell. The entire year was trauma. The entire year was difficult. While I was in that heart of darkness, the only light that shined was through studying science. The only thing I cared about was science. Thank God I eventually got out of the prison. Eventually I recovered and got back to studying and was able to attend the exam.

*LH The Thanaweya Amma exams took place in-person with some precautions.<sup>3</sup> What was your experience of taking the exams?*

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3 For information on how the MOETE dealt with the exam during the pandemic see the video, 'Exams During Covid-19 in Egypt', 19 June 2020, <https://www.youtube.com/watch?v=...>

G The first thing was that the exams happened in the peak of summer with temperatures of 40 degrees. There were no fans in the exam room. We did not even have air to breathe. This was traumatizing. This was a terror. This was unlike the terror of the school year because that terror motivated you. But this one traumatized you for no reason. What was this? Who decided not to have fans? When we asked, they said, 'Well, it is because of the coronavirus'. But we know that was not the reason. We know they did not install fans because they are expensive, and they do not care. They couldn't care less. But we did not have time to complain because the exams were happening. We had to accept that we were going to take the exams in this condition.

I remember looking down at myself during the Chemistry exam drenched in sweat. All I could think of was that I had to be careful so that the paper wouldn't drown in water. I took out tissues and put them in my hand to stop the perspiration from dripping onto the paper and wrote carefully. I looked around to see how my friends were managing. Some of them brought towels to wrap around their neck to stop the sweat from getting in the way but it didn't work. They had to use the towel to rub their face every few seconds. This was horrible. We studied an entire year for this exam! And there was no one to complain to. I do not know if Dr. Tarek knew about this environmental problem. I do not think so.

But that wasn't the only thing. Just a week before our first exam in July, Dr. Tarek held a press conference and announced that exams would be on paper. We would not be allowed to bring in the tablet. Tablets would be closed, and the system locked. We could still bring in the official textbook for the subject, but no tablet. This was a disaster.

*LH You and your friends had spent the entire year studying, so why was it such a disaster that you could not bring the tablet into the exam?*

G During the third year we thought we did not have to memorize anything. (This was the principle of an open book exam that Dr. Tarek had been advocating.) We were planning on uploading our notes to the tablet. With just one week's notice, we had to figure out something else

to do, so we innovated here. We were allowed to take in our schoolbook. What many students did was to use every empty space on every page to write in notes (see Fig. 26.1).

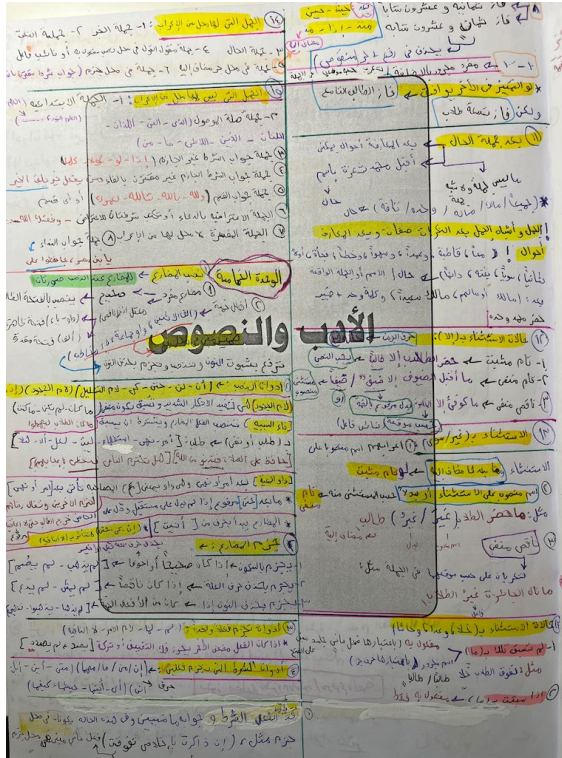


Fig. 26.1 Arabic textbook with handwritten notes by Grade 12 student, 2021. Photo by Linda Herrera.

For certain subjects like Physics, we needed a different solution because it was not enough to write notes into the textbook. A technique that many students adopted was to produce a book that looked like the government textbook, but composed of all the notes and material we needed. Basically, this meant making a fake textbook. The way we did this was by using Adobe Acrobat to create all the pages in color (see Fig. 26.2), and then to wax on the cover from the textbook and bind it to make it look like the official schoolbook (Fig. 26.3). This was a hack in every way. If someone opened the book and did not look too hard, it would appear to be the schoolbook. Many students took this kind of hacked book to the exam (see Figs 26.2 and 26.3).

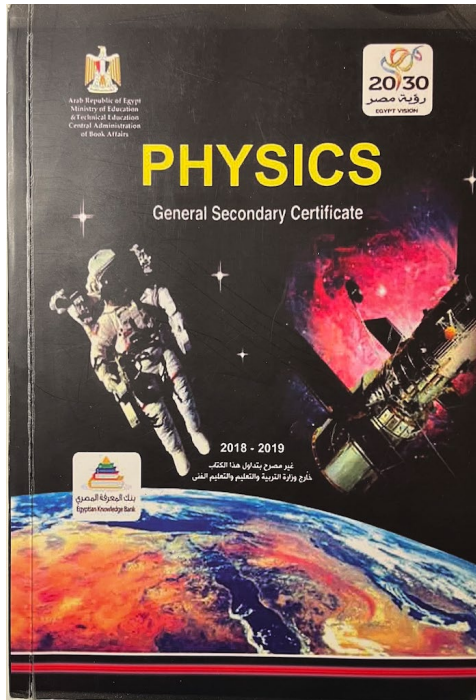


Fig. 26.2 The cover of a hacked Physics textbook made by a student, 2021. Photo by Linda Herrera.

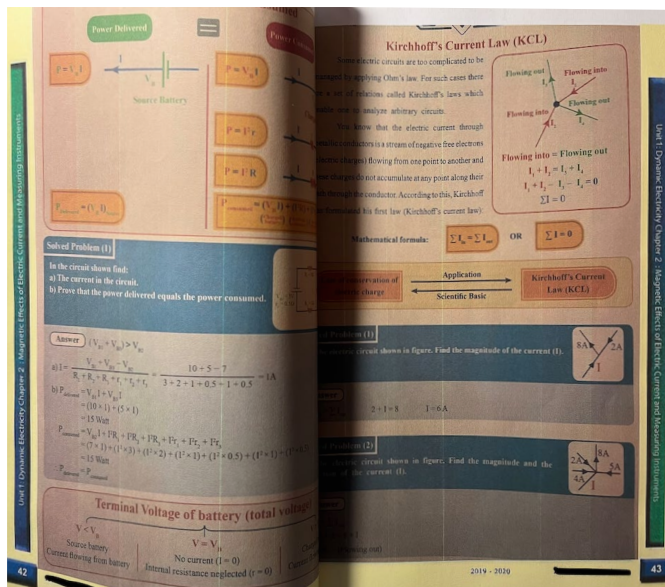


Fig. 26.3 The inside of a hacked Physics textbook with typed notes to resemble an official book, 2021. Photo by Linda Herrera.

During the Physics exam, the proctor stopped at my friend's spot who was sitting across from me, someone who was a top student by the way. He told him, 'Give me your book'. I knew this guy was using a hacked Physics book. He told me later that he thought this was the moment where all his future would be ruined. Like a scene in a Hollywood movie, everything was happening in slow-motion and very dramatic. As he handed him the book he was thinking, 'Do not appear suspicious. Do not say anything. Just give him the book'. The proctor took the book, held it up and said, 'Good luck'. Nothing happened.

## 6. Why Students Circumvent the Rules

*LH There would have been serious consequences for anyone who got caught bringing in hacked books or cheating in any form. Why did even the top students take this risk? Do you think it is ethically wrong to cheat?*

G Yes, it is wrong to cheat. But I do not consider what students did with the books as cheating. I know students who spoke to each other or entered the exam room with their phones. That is cheating. Entering with your notes written in an open book exam, even with a hacked book, was not something we considered 'cheating'. I mean, replacing the pages of the schoolbook with pages of our own notes, was technically not cheating, since these notes were the same content we would have written with our own hands on the pages of our textbook if we had enough space to do that.

The reason we did this was because we do not trust the system that makes the rules. Who decided we should take the exam in 40 degrees Celsius weather? Who decided that schoolbooks were allowed but notes were not? I mean, changing the pages of the textbook would not affect whether you knew the answer to the question or not. If you did not study, changing the pages would not amount to anything. We studied for the exam for twelve months. We were not trying to be immoral or something. We were just playing by our own rules. We did not trust the thinking behind the decisions. We did not think the rules they set were valid. We decided that bringing our own notes was a good idea. In our thinking, we wanted to secure the exam, secure a high score. But we also wanted to study and learn.



We said, let's make sure we learn the science, because there is going to come a day when we want to do something in science. We really studied because we care, our parents care, and we wanted to get into university. Other people did not do this. They cheated and that's it. For example, our class had about 250 people. Only 50 cared about what they were studying. 50 out of 250 is not a big ratio. So why did some of us 'cheat'? Because we are in the Hunger Games where it is survival of the fittest. Some people had breakdowns during the year and did not recover. They lost. To win the Hunger Games, you have to be the fittest, and maybe the fittest is going to push you to do ugly things.

*LH You talked about how students help each other with the exams. Do you see a tension or a contradiction with helping people you are in competition with?*

G There is always a sense of solidarity between individuals entering a competition. We talked with each other and shared resources like notes and hacked books. Even on Facebook groups when someone asks a question, they get help from people they do not know. People in Egypt are very religious, and we believe in fate. Helping each other is something people believe cannot possibly affect their future. But though we support each other, there is still a sense of competition. Fundamentally, this is a competition. It is very simple: the best of us will win.

*LH Does the reality of widespread cheating, or circumventing the rules, however you want to describe it, mean that the system is not going to produce ethical people? Or do you think we should reevaluate how we think about ethics?*

G The system never did produce ethical people because cheating was always a part of the Thanaweya Amma. What was new was that we had the tablet where we could put all these things. I have a friend who would not cheat, period. He wanted to study medicine, and he would have been really good at it. But with his score he got into a business school. He doesn't like business. He doesn't like marketing. He talks to me every day about how he is depressed and has lost purpose in life. There are people like him all over the country. These people are blaming Dr. Tarek, but this is not his fault. He did not do this. Dr. Tarek said that the first task of education should be virtue, morals, to create better people with an aim and a purpose and a character. That should be the focus of education, not the grade in Chemistry and Physics. If you do not create a person with

character, an identity, a code of honor and a code of ethics, you are setting yourself up for failure. The system pushes us towards cheating by having exams that define our future. We are living in an environment where cheating is almost everywhere. I mean, my friend who would not cheat still earned a high score, but not compared to the scores of people who cheated. We heard about many exam halls where the proctor let students take in any books. They let people openly talk to each other. I think people all around wanted Dr. Tarek to fail.

*LH What makes you think that people wanted Dr. Tarek to fail?*

G People hated the fact that if Dr. Tarek succeeded with the education reform, it meant that he did something that they were not able to do, that they could not do. They hated the man and tried everything to make him fail. People in parliament were really against him.

## 7. The Influence of a Minister

*LH Why do you think some people, like the ones in parliament, could not see Dr. Tarek as an asset for the country?*

G They thought he was a dreamer. Let me explain this. If you're a student struggling to get by and then there is this spoiled kid who comes in with all these fancy tools and fancy brands and he's doing this great work and everyone is applauding him, you will resent him. For them, Dr. Tarek was like this spoiled kid. They were criticizing him because he studied in America (for his PhD). They saw him as having some advantages over them. And worst of all, he dared to have a dream for Egypt. The saddest thing about it was that he was the first person in the government who had a vision for education. He was someone with a clear vision. Whether it worked or not, that is not the point. The man is a genius in some sense. I remember watching a video of him going to the Education Committee in the parliament and saying, 'I am Tarek Galal Shawki. I said I am going to apply a new education system, and I am going to apply it next year!' And they tried to stop him. They said, 'No, doctor. We are here as the parliament. What you are saying is not constitutional'. They began fighting. I remember it well (Shawki 2018). At the end, he did his best.

But you see how people behave when you are trying to do your best. The change will not come here. There is no change here.

I came to realize that the antidote to all the corruption we see today is to create better people at the individual level. If we focus our attention, time, and effort on a single individual, we will produce a good person, a virtuous one. And if we do so for multiple individuals, then we have a group, multiple groups, and we will eventually have a virtuous, moral community, hardworking, with high standards. Dr. Tarek knew that building an identity was far more important than teaching science at schools. That was his vision for the next generation.

*LH Did you receive the grade you were hoping for?*

G I needed a grade that would get me to science. I wanted to achieve the vision of Dr. Tarek. In the end, I did not get the grade to study Computer Science in a public university, which would have been my first choice. Fortunately, my family has the means to send me to private university which is easier to get into in terms of grades but more financially difficult.

*LH Why do you feel so strongly about pursuing science, and in particular Computer Science? Are you from a family of scientists?*

G No, my family are more in law and public service. I would say my family is like any other Egyptian upper middle class family. Most of them served in the government after obtaining higher education degrees. I used to look up to one of my cousins a lot when I was younger. I asked him how I could be like him. He said the first thing is that I must be educated. And so, from the first year of middle school I bought a lot of books on history, politics, things like that. But in the end, I shifted to Computer Science. Dr. Tarek influenced this shift. If it had not been for him, I would not be here. I would not have been so excited about pursuing Computer Science, about the possibility of being a researcher. This is all his work. This is all his vision coming to life. For me, the man was a model to follow. This is more crucial than an exam or whatever. Dr. Tarek set high standards for us. He set a clear vision. He did something to help build our character. One of Dr. Tarek's videos really affected me. He was saying that people back in the day used to have more dignity and self-respect, they had purpose, they had aims. Life is not about getting

a degree and hanging it on the wall. Life is about a journey filled with learning. Education is the preparation for a journey filled with learning. If you focus on something that matters, maybe you will leave your name in history. I became a Computer Science major and am now at the top of my class. Why? Because of the standards he set for us. It is his vision, and hence why I am a great admirer.

*LH How did you feel when Dr. Tarek was replaced as Minister (in August 2022)?*

G Really sad. He went through a tough time, honestly. I hope he is still there in the background doing his work with the current Minister.

*LH If there had been a different Minister of Education, do you think you might have still found your way to Computer Science?*

G No, absolutely not. I saw how people from the old system, like my brother who is two years older than me, were stuck in the old ways. There was no dream.

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