

**Where is My Teacher?  
The Evolution of the Digital School  
And its Impact on Global Learning**

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Good afternoon, ladies and gentlemen. Thank you, Professor Larson, for your kind remarks. It gives me great pleasure to be with this distinguished group of educational leaders and professionals at this prestigious educational institute, MIT. Originally, Ms. Huda Al-Ghosen, General Manager of Training and Development at Saudi Aramco, was supposed to be here, but due to an unforeseen business requirement, she had to attend a board meeting. This has afforded me the great pleasure of being with you here today.

At the same time, I am very delighted to inform you that we at Saudi Aramco, starting with our president and CEO, Mr. Khalid al-Falih, and extending throughout our corporate management and HR professionals, are very much excited and supportive of MIT's initiatives and efforts in developing, facilitating, leading and providing quality education to global communities, including those with limited resources.

Over the next 20 minutes, I will share Saudi Aramco's experience as a case study in creating a corporate culture for its employees, families, dependents and the local community. It is important to highlight at this point that this could not have been achieved without the existence of critical enablers, one of which is the continuous development of teachers to become facilitators and agents of change. I will share more with you about these critical enablers at the end of the presentation.

The outline of my presentation is as follows: first I will go over some historical milestones; then I am going to dive into Saudi Aramco Learning: road map, online resources, e-learning, blended learning; I will talk about enabling quality learning within Saudi Aramco; then I am going to share with you some of the projects we have as part of our social and corporate responsibility. I will conclude with the challenges we will face in the future.

Now, during the meetings we had yesterday and today, we had some very interesting discussions. One of the issues we raised was around teachers: How can teachers change to accept the new technology and learning. How can society accept this new way of providing education? There are those who support it. There are those who do not see it and do not accept the change, because of the way they are and because of their frame of reference. This is not new. It has been this way through history. If we look back at history, we will find that what is happening today has basically happened in the past, but the journey continues still.

Let's look at this quote, from the year 1703: "Students today cannot prepare bark to calculate their problems. They depend on their slates, which are more expensive. What will they do when the slate is dropped and it breaks? They will be unable to write." Or from 1815: "Students today depend upon paper too much. They don't know how to write on a slate without getting chalk dust all over themselves. They cannot clean a slate properly. What will they do when they run out of paper?" 1815? You are talking about change. Now, from 1914: "Students today depend on these expensive fountain pens. They can no longer write with a straight pen and nib..." Or from the 1950s: "Ballpoint pens will be the ruin of education in this country." And look at the last sentence: "Businesses and banks will never allow such expensive luxuries." Even as recently as 2000, we see: "Students who use computers in the classroom at least once each week do not perform better on reading tests than those who use computers less than once a week."

The point is, whenever a change is introduced, it has to be coupled with and supported by a change management in order for it to be successful. The way we apply this today for e-learning is that in order for an institute to accept a change, and for teachers and society to accept it, we have to have a change management. That is what I will illustrate for you within Saudi Aramco. I will show how we have journeyed from the 1940s until the present day and the change management that we have employed.

After the discovery of oil in the 1930s, the first school Saudi Aramco had was in 1941. This is the one you are looking at. (See slide #9) However, if you look inside, you will see that we utilized the latest technology at that time, too. (See slide #10) Then we moved on. (See slide #11) This is the first official well-known school that Saudi Aramco managed, with the purpose of training its employees to operate the complex facilities that we have within the Kingdom of Saudi Arabia. Then things evolved, and we expanded. Our facilities grew, our production increased, and the complexity of our technology also became very sophisticated.

So education is becoming a cornerstone of the strategies that we have within Saudi Aramco. We operate in remote areas, like Shaybah. Shaybah is basically in the heart of the desert, the empty quarter. We made it like an oasis. Part of the obligation we have, based on the values we uphold within Saudi Aramco and the vision for HR, is that every employee in the company— she or he— has the right to have access to education and to training to maximize his or her full potential.

So with e-learning, with the technology that we have employed, we have become able to reach all of our employees 24 hours a day, seven days a week. We require this because we operate our facility 24 hours a day, in different areas.

The road map that we follow, and the principle behind it center on lifelong learning. We started in the 1950s with very basic training, merely basic operating training, basic English and basic math. We tried to Saudize all the positions we had through very structured training. We started building what we called training centers and training resource centers throughout the company, in order for the employees to have access. We moved into computer-based training— CBT, as it was known at that time— buying

some of these CBTs off the shelf. We started converting some of the programs we had on CD. Then in the 1980s, we went to online learning. We followed all the developments in the market and started buying off-the-shelf materials.

The major shift in the way we have created and recreated the culture of learning in Saudi Aramco started in the 1980s with self-development. So we came and we started building a culture. To our employees we said, "Listen, we are not the main source of knowledge for you. Development is not our responsibility as an HR organization. We can provide the resources, we can provide the culture, but it is your responsibility as an employee to be self-developer, to go and seek the learning you want. We will provide it to you." That shift required lots of changes in the management of culture. For years, people were dependent on teachers, on trainers, on consultants to provide it. But all of a sudden, we said, "This is it. Now you are on your own, and we will provide it."

The resistance we met was not from the learners themselves, but from the line managers. They were saying, "Listen, in the past I used to send my employees to you for training and education. And now you are telling me 'no'? They have to do it, and I have to be the mentor and the leader?" So we have done lots of cultural change, and we have tried to influence it positively by changing our policies, by changing our procedures, by introducing new incentive programs and recognition. I think we have come a long way. I will show you a statistic that shows where we are today from this journey that we started.

Then we started in 2000 with blended learning. Now, most of our courses have both online and conventional training. We have more than 2,000 online courses, some of which are compulsory. We made it compulsory as part of the policy, so as to encourage people to go and enroll in these programs.

Let's look at the statistics of active users of e-learning courses within Saudi Aramco. (See slide #14) If we compare between 2003 and 2009, you will see the difference. Now, this year we are projecting the number of active users at 125,000. By the way, the total number of employees at Saudi Aramco is around 55,000 employees.

Now, we looked at age. We are using this graph just to show the comparison between 2008 and 2010. We see that the younger generation, the younger employees coming in, are more into e-learning, more into IT, more into the Internet. They would like to stay away from conventional courses as much as they can.

The number of completed online courses in 2009 was 288,073. That tells you, if you look at the story from 1941 until today, that there has been a major shift, a major achievement in terms of how we as a company— and we are talking about just a company, not a whole society— can effect a change. As a company, how can we change the culture of our employees and our line managers to accept the new technology of learning, to accept e-Learning, to accept online as the way of operating our facilities? This is the way for the future as well.

Of course, this goes with the vision that we have as a company, as well as being a business requirement. We operate locally, within Saudi Arabia, and we operate internationally— we have offices in Houston, in London and in Riyadh. We also operate offshore and onshore, in Shanghai, Malaysia, Dhahran and elsewhere.

Based on our company's values, one of our objectives is to ensure that employees always have access to training and development. So by doing this now, our employees, regardless of where they are, have the necessary access to complete their course requirements as part of their development and promotion planning. We do not just provide access in Dhahran, and require employees to move into Saudi Arabia in order to complete their course requirements.

One of the tools and the means we use is MOODLE. This tool helps us to interact with our teachers, trainers and students during and after working hours, during weekends and workdays. Of course, we are supporting this within a very structured curriculum development within the HR organization of Saudi Aramco, where we develop our programs up to a certain standard that we then maintain. Then we have a hard copy and soft copy, and all of our employees have access to it.

Now, from our experience, in order to have a very successful transformation of a culture of learning, and the acceptance and support of those who are receiving it, there are five key enablers that have to be in place. This is a reflection of our own experience within Saudi Aramco. The first one is that there has to be a clear vision about educational learning. I think we have it within our company. Not only this, it has to be strongly supported by management— corporate management.

The third enabler is that you have to have appropriate infrastructure. Within the company, we have a state-of-the-art infrastructure, and it is always developing. Once the IT solutions, or the IT infrastructure, or the e-learning infrastructure, develop in the world, we always develop with it and we move to the state-of-art technology.

The fourth enabler is continuous staff development. When I talk about continuous staff development, I mean teachers and trainers. In one organization that is providing technical training within Saudi Aramco, we have about 820 teachers and trainers. By the way, the average number of years of service in the company is about 31 years. So we have built a culture. We do not always hire directly from outside; we hire high school kids. Then they go to university, and they will stay with us until the age of 60. So just remember this. With all of this, we have been able to motivate them, we have been able to change the way they think and help them to accept the new realities of learning, and the new ways and the new tools.

So within the organization, under Dr. Aaaam and his team, we have an organization that is fully dedicated to training and certifying facilitators and teachers in new technology. No teachers or trainers run our classroom unless they are certified. Of course, it is not all sweet and dandy. Some are still struggling with it, especially with the new technology. But we are accepting it as a reality and we are telling them that we are moving with it.

We have the culture of keeping our employees with us, but we are telling them also that this is the way we are, and this is the way the future is going to be.

So from this, to summarize, it has not really been an easy journey. It is a reflection of what has happened historically, as you have seen. We are just a smaller example of the reality in the world. But we had a clear vision, we had commitment, and we had a culture that said this is the way we are going to go, and we are supporting it, and we have moved a lot.

From 1941 until today is a short time span, but I think we are very proud of what we have done in the field. Today as we speak, we have in our training centers 5,000 high school kids - high school graduates - studying. They are actively enrolling in our training program to become employees. Plus we continuously have about 1,000 employees every day who go through our training program. We are talking about 6,000 individuals that we are training daily by using the technology that is helping us. Having said that, there is also an obligation and commitment from the company to the local communities when it comes to educational learning. That is part of the value we have and part of the culture that we are promoting.

Maybe you have heard that about three years ago the King of Saudi Arabia entrusted Aramco with building King Abdullah University of Science and Technology. It was built from scratch by Saudi Aramco, and I think that was an honor for us. It demonstrates a belief in our capabilities within Saudi Aramco. It also aligns with the culture of social responsibility that we have. However, that is just one example. Now, to develop the communities in different fields, we have different initiatives. One I would like to focus on and show you is that education is a primary ingredient of social development, and it is the obligation of everybody involved to expand on it and to give it to others.

If you look at this slide, you will see that before the Internet - and before e-Learning and the connectivity that we have - Saudi Aramco developed what we call a mobile library. (See slide #20) This mobile library is very scheduled. We go to remote areas, to small towns and villages, and we have our books with us, and we lend them to the people. So we go to a small town— sometimes it is really in the heart of the desert— and we stay for one week. We take with us science books. We take with us stories for the kids. We have done this for a long time. Now we are embarking on some online training in math, science, and other subjects to provide to the local community. We believe if the local community has access to education, then those who are the feeder stock for us will be adding value to us as well

So the question that I posed in this presentation is, “Where is the teacher in all of this?” This is a quote that we had from our own teacher just three days ago. He said, "A teacher will never be replaced by technology. However, a teacher who understands and uses technology will replace a teacher who refuses to use it."

This is the lesson, and this is the moral of the story, which we need to communicate to all our teachers and trainers. The message to teachers within Saudi Aramco is that we are not going to replace you, but that technology is the future, is the way we are going. We will

provide you with access, we will facilitate your learning and we will have incentive programs for you. But if you are not going to be with this stream of development, others might come and take your place.

With this, I conclude my presentation. Thank you very much.