

# Podcast transcript

## Learning Transformers: Episode 4

### Interview with Dr. Shazia Naser-ud-Din

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ARIS COLOGON: Learning Transformers, a podcast by the University of Melbourne on the future of online higher education, presented to you by the Learning Design team at the Melbourne School of Professional and Continuing Education - or MSPACE for short. This is a space where we build bridges between industry and academia, and we explore the transformation of online professional learning that prepares learners for future job markets.

In each episode, we'll hear expert perspectives on emerging trends, explore influences on learner workplace-readiness and competency, and gather insights that keep us not just responsive, but actively impactful as expert practitioners in the constantly evolving digital education landscape.

ANDREA LOU: Welcome to Learning Transformers. I'm your host of this episode, Andrea Lou. Today we are very happy to have Shazia Naser join us. Dr Shazia is an academic and clinician active in higher education at international universities including Australia over the past two decades. She has been involved in a wide range of areas, including curriculum design, critical thinking assessments, metacognition and interactive online teaching with publications in high impact journals with research topics ranging from higher education in orthodontics, meta-analysis, new technologies in orthodontics, to improving the quality of life for patients and practitioners. Welcome Shazia.

SHAZIA NASER: Thank you so much for having me, Andrea.

ANDREA LOU: I guess to start with, in the past few years especially during the pandemic period, there were a lot of new technologies in many industries, and I'm sure orthodontics must be one of them. Even though we might hate to go to the dentist, it is a topic that everyone cannot avoid, so could you tell us as a teacher and practitioner, how do you keep your students up to date with the latest developments?

SHAZIA NASER: Thank you for that question. So relevant to this stage in the history, and Andrea, you mentioned very correctly. Most of us have had dental experiences and stories that we can always share, not to mention that orthodontics also goes almost in that parallel view if you like. So your question regarding what has happened very much in the past couple of years, I can speak more confidently with my own specialty which is orthodontics. And I like to express that the CAD CAM which is an abbreviation for computer-assisted design and computer-assisted manufacture. This is not unique just to orthodontics for that matter. It is across the board. We have it from the industries of car manufacture to any manufacturing.

What really transformed and it's so apt to use that word with your podcast is that it changed the way a clinician does orthodontics on the chairside, and it helps the patient who is the receiver of it to know exactly what it will entail. You know that orthodontic treatment usually covers couple of months, a year, and in some cases which are complex, up to three plus years. So, the patient really needs to have that clarity of how this will progress over the months ahead. CAD CAM has given us that opportunity to discuss with a patient even as young as 8 years old, so I have a range of patients that can be as young as 8 to almost 60 years. And the beauty of the CAD CAM is it's very precise. So instead of having freehand where we would give forces to teeth. With precision it's almost very very apt to say that it's only 0.25mm of movement per aligner.

I want to speak more about the aligner experience, because that is the technology that has come into orthodontics in particular. We also are using technology in other parts of dentistry, such as implants. The CAD CAM has really revolutionized in the past decade, and more so during the lockdown.

ANDREA LOU: Right, so with all these new technologies, how did you integrate these into your curriculum?

SHAZIA NASER: Absolutely a very valid question, and I'm very fortunate to be a part of the University of Melbourne. Our head of the department Professor Marie Cornelis joined us from Europe, and she is a leading name in the digital workflow, and she is introducing that at this point we want our dental students to be clinician-ready at the end of the four-year program. And I'm sure as you are aware Andrea, in the University of Melbourne, we have an international presence, because we have a lot of students from Canada. And as a result of that, it really helps them to understand what is it that we need to be aware of as far as orthodontics is concerned. And to teach them these modules, and there are lots of other you know manufacturers, but I'll stay with Invisalign and I've no financial interests, so let me just get that clear upfront. But that is the one integrated into the curriculum, and you can see the students really light up in lectures, because they think ok now we are talking of something that as soon as I graduate, I know there's a huge demand, because the patient comes and asks me, and I know how I can treat the ones within the scope of practice for me. Now, if they are complex, obviously you need to refer them to the specialist.

The other thing with technology which I want to also highlight is it gives us what I mentioned earlier the GPS of smile, which means they immediately see as a patient, the algorithms put them through, and the synchronicity is so quick now. It's within a minute the patient can see their own smile transformed with a simple QR code to see what would be before and what would be after. So all those elements are now really changing the way we look at orthodontics.

ANDREA LOU: Wow I really wish I had that experience when I was 11 and had to go through a very painful process of orthodontics, I never got to see how it will look like until the very end of that process so I'm quite jealous of the young people nowadays who can have access to this service.

SHAZIA NASER: So, could I just ask you, how did you find the orthodontic treatment when you had it because I'm assuming you had it with the fixed braces?

ANDREA LOU: Yep.

SHAZIA NASER: Just if you can just share as to the length of the treatment and what were the things that you were not supposed to do when you had those in your mouth.

ANDREA LOU: Like I said I had it about 20 years ago so at that time there was no Invisalign and everyone had to wear those metal braces on our teeth and it was such a painful process that it did not control the scale to which it moves your teeth. It was such a painful process that I was not able to bite and chew for a certain period of time, I think it was for as long as a few months. I remember I attended a birthday party during that period of time, in the face of all those delicious foods I was not able to eat any I could only have porridge, because that's the only food I was able to eat at that time.

So, you can imagine that painful experience that I had as a teenager, that whole treatment lasted for about two years. During the two years, I had to visit the clinic every fortnight I think so it took me a long time to get the teeth in shape, but still I wasn't able to see how it will look like until the very end. If we had the vision to see how it unfolds eventually, it will give the patients a lot more transparency and confidence, so they know what's coming and what's happening to their teeth.

SHAZIA NASER: I think you summarized it perfectly and thank you for that experience share Andrea, because it is a traumatizing period in that sense because like you even remember after two decades the birthday that you missed out on and all the goodies you could have feasted on. The good news is with Invisalign, as I mentioned, is a very gentle force level so the patient experiences minimal pain.

In fact the first aligner they might report on zero to ten scale only four or five, never beyond that and then in subsequent aligners because it is that sequential aligner therapy that they tend to say that oh you know what I didn't feel any pain and I can say that with confidence because I treated myself during the COVID.

I was blessed I had a natural aesthetic dentition but it was more functional with a crossbite and I was just trying to settle that first and I found that Invisalign really provides me very precise control and the predictability from my case was almost 100% so I was really pleased, particularly being a mature patient to have that efficacy and effectiveness in treatment. But there you go, interesting times ahead.

ANDREA LOU: It's amazing that you were able to not only learn this new technology but treat yourself because you have been in the industry for such a long time and Invisalign is a new development, so you have actually learnt about this technology after you've graduated from your university education obviously so I assume there will be a lot more new technology just like Invisalign that come in the future.

So, I'm sure we need to train our students to be lifelong learners so they can, like you, adapt themselves to new technologies and pick those new technologies up to treat their future patients. So, in your class, how do you make sure that we can teach our students to become lifelong learners, especially with all the huge amount of information were all exposed to nowadays, how do you make sure they are able to equip themselves with the right information, the right knowledge and skills?

SHAZIA NASER: Excellent question and this is the real crux of the matter because we are passing through the most interesting time in the history, particularly in education sector and my interest in higher education as you mentioned right from the introduction.

When I graduated 25 plus years ago Andrea, literally we thought ok we have done everything but today this doctor of dental surgery student very well knows that they have to continue to renew their knowledge and what are called in the industry now as disrupters because every 6 months to a year something new comes along and you really have to be savvy enough to know if this is the long term success story and the way we like our students to understand that is first and foremost they have to have a strong foundation because a foundation will not change, the anatomy, the physiology, the mechanics and the occlusion, the biomechanics they are the same.

So, when a new technology comes into the space, they need to be alert to what is it providing. So, the way we are teaching at the university is trying to integrate an engaging platform with students with the latest that is coming into the profession and then having those conversations and that in itself is a skillset, once they are aware that this is how you are always going to have interaction with your other professionals through organizations, associations, and you can then distal out what is the real lasting or the one that is helping the patient because at the end of the day there's so much out there that if you get into it all of it's going to confuse anyone even myself.

There's another disruptor by the way, it's not just the clear aligner in orthodontics, it's called the temporary anchorage devices and you need to attend conferences and understand and have that clear discussion and candid talk and by then, do a cross check with other references.

So in the world wide web I would suggest use the leading journals that are reviewed and get that information talk to other who have used the system and see how you will observe it in your own practice, and I think that skillset will help them develop confidence with these changing times in dentistry.

ANDREA LOU: It sounds like in order to become a good dentist, our students not only need professional skills, but there also a lot of other transferable or soft skills that we need to teach. How do you as a teacher include teaching of those soft skills in your curriculum?

SHAZIA NASER: That is again the basis of everything I think communication and just like we are having this chat and discussing what are the issues at this point in time and what could be the possible solutions. The interesting thing is because we are so well connected, we can have those conversations, put them on podcasts and have that followed through.

Now the way I look at conversations are two ways. One is of course in the academic circle where you can have these talks and see what is working and what is not. But the most important one which I realized after two decades plus, is communication with the patient and what I find is in your experience also with orthodontics in the past we hardly ever spoke to our patients.

Today our patients are so aware they have done their Google search, they have done their homework before they come to you, they have very interesting and sometimes challenges questions to the practitioner and I'm blessed to be in academia so I'm questioned most of the time so it doesn't have to be an extra skill set for me, but for clinicians they need to be aware of it because the patient is savvy enough to make sense of whether they want to have treatment with you or they go to someone who can clarify.

Now algorithms and all that visual helps a lot so as you said in your experience you didn't know how you would look at the end of the treatment but being empathetic, understanding what is it that they really need to not start a treatment if they are not clear of what the end goal is, very essential.

So, some of our students are gifted, others are shy, so my humble request is try to practice this modelling and speaking and the more emphatic you are, the more compassionate you are, it is a beautiful area to blossom because you feel really good when the patient gets the service for which they had come to you and you feel at the end, you know, that was well done.

ANDREA LOU: Thank you Shazia, I really loved that humanistic perspective of dentistry. I remember back in 20 years ago, I did not have a lot of chance to actually speak or communicate with my dentist. I never knew her as a person so if I had a chance to properly talk to her, I might be able to be better prepared for the whole treatment and also for her to provide more tailored support to me as a young patient.

So, in terms of this communication with patients, I'm sure you will also try to collect feedback from your patients so you can further improve the service you provide. So how do you usually train your student to collect feedback from their patients?

SHAZIA NASER: Very valid and very important we live in a world where everything is taking place in real time so real time feedback is so valuable that I can't stress enough, now we are all very busy so if you've finished your appointment and you leave there are so many other things to worry about you know picking up the kids, going to the groceries and all that.

What happens is then the feedback gets a little distilled and the patient cannot recall exactly that experience. So for me, coming back to your question, the students ask the patient before they leave the clinic chair, how did I help you today did you have anything to help me understand your needs for the next time? Or could you put Google Review which is a common way we are doing as well.

The other interesting thing I just recently had with a very young patient who was 8 and needed interceptive orthodontics and that's why we are doing this Invisalign first for her and she's the most gorgeous girl, very articulate and I said do you mind giving me a one minute video so I can actually not share on social media because I have a very strict rule for privacy of my patients, but to just share it with students to learn that you know what that feedback helps you and she said I can put elastics any time it doesn't bother me and I thought wow, from an 8 year old.

So that type of feedback instantly is actually the one that will help that what they call in the Japanese term continuous improvement or kaizen. So I am very happy for having those snippets of feedback because they just help us make it better for the patient next time.

ANDREA LOU: Well, that's really fascinating that you were able to bring together this Japanese concept of kaizen with the practice of dentistry. So, could you please elaborate on this combination, how do you apply this concept in a professional practice of dentistry?

SHAZIA NASER: This is something that has fascinated me since I was a child I was fortunate to be in the United Arab Emirates where I attended the LEAN course spelt L-E-A-N and it is actually a business model which works on the six sigma and kaizen is a Japanese term as you mentioned Andrea it is the continuous improvement model.

So, the easiest way to think about it is you know when we buy a product like Toyota or any Japanese product, we know it'll last for a lifetime because they have actually made that their mission statement that every vehicle will give that high effectiveness, efficiency throughout its life and what it really interested me was efficiency and effectiveness which is the result giving us excellence is in all frames of life, literally.

Whether I do it in the clinic, or I do it in the classroom with the students, or even at home. So, any process that you have how can I make it efficient that means it takes less time and it gives the same effectiveness that it had at the previous process point. The other thing is whenever we do anything like giving the example of a patient feedback, you start thinking ok the patient has given me feedback and they didn't like this, this, this, A, B, C, can I remove those ABC's in the next visit that the patient comes in and that is that continuous process.

There is lots of good reads and lots of great books. One of my favorite one of course is 'seven habit(s) of highly effective people' and it's by Stephen Covey so anybody who wants to learn these soft skills as you mentioned which are really important, those would be my go-to.

ANDREA LOU: Thank you, that's great recommendation Shazia. So, do you also include the teaching of this kaizen concept in your curriculum?

SHAZIA NASER: Not at the moment but I think it's a great idea I think I would like to have that so that the students can improve their own learning be it through education which is metacognition you mentioned any of those would help and improve the quality of life and at the end of the day we need to talk to everyone, whether it is the patient, practitioner, or the supporting staff. So, everybody has to have that mutual respect and work the best.

ANDREA LOU: I can see that there a lot of ways to streamline the process of treatment and improve patient experience. Could you give us an example of how you have to be able to streamline the process and make patient experience more efficient?

SHAZIA NASER: Yes, obviously with the COVID we started to see outside the box. I think one of the things that I took away from COVID is, it really changed the paradigm for us all and the shift of thinking was does the patient really have to come physically for a consultation into dental clinic or the dental chair because as you know for cross infection every time the patient visits us we have to clean up every bits and pieces, especially after COVID.

During COVID of course we were in lock down and Melbourne had the longest lockdown with six lockdowns, made history with 2, 62 days of lockdown and what I then had that was the ritual portal of Zoom with Invisalign. So, the patient would log in and we would see each other, the aligners were posted to their homes, so the continuity of orthodontic care actually went throughout the COVID period, that's why all Invisalign patients finished on time which was amazing.

So, in the teledentistry for those who have not prided, I recommend please do because it's the most valuable space. Why? Because A, the patient is very comfortable, young or old, they're not in what they find as you said dentistry not everybody's favorite space to go to. The second was that they have their own pets, siblings, their toys, so you start to see the patient in their environment and see what really is of value to them and that connection, that soft skill was heightened with that teledentistry.

Now, one could ask but Shazia how do you see the teeth? Well, these days we are in a very interesting time, there are some games people play but these retractors they put in their mouth. So, some of them would have that, so you could see quite clearly from the camera what was the real cause or the fit things like that. But then the interesting thing is, they can even use teaspoons just to retract the buckle or the cheeks to see where the teeth are.

Now, of course there is this very strong app that helps the to send their photographs to the clinician and it's called Ritual Care so many times as you mentioned, we don't need to see our patients fortnightly they can come after 6 weeks and some of our adult mature business entrepreneurs they say give it to me for 3 months and I'll see you if I need to see you I'll come earlier. So, it actually helps this level of efficiency and effectiveness and higher patient satisfaction.

ANDREA LOU: Wow that sounds fascinating, well Shazia thank you so much for showing us a very attractive and fascinating world of orthodontics.

SHAZIA NASER: Thank you so much Andrea for giving this opportunity to share all this and have a really engaging chat with you. I would also like to say my gratitude to the University of Melbourne where a lot of the education is in that space of in trustable professional activities it's called EPA and it's under Professor Liz Molloy, Mark Merolli and Professor Chi Baik.

So, there are what you call transformers, and you will have a lot of interesting things come up with these technologies and how this all is going to integrate as the curriculum gets developed in the coming years. So I have had real fun with you and thank you for your time.

ANDREA LOU: Thank you very much Shazia and likewise, you have shown us a fascinating world of orthodontics which I'm sure most of our audience are not that familiar with and next time I go to a dentist I might not feel that scared anymore.

So, for those who are listening to this episode right now, if you're interested in the resources that Shazia has shared with us today, please visit our website at [omny.fm/shows/learningtransformers](https://omny.fm/shows/learningtransformers). We will post more episodes in the near future so, please stay tuned. Thanks so much for listening and we will see you next time on Learning Transformers.

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