

Hundreds of children of TSMC workers from Taiwan have enrolled in Deer Valley schools



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Brittany Hughes, the principal at Sierra Verde STEAM Academy, got word in 2022 that the technology-focused school was about to receive a wave of students from Taiwan.

Hughes sprang into action.

The K-8 school in Glendale, part of the growing Deer Valley Unified School District, is accustomed to getting new students, including increasing numbers of students from other countries. But this big influx would be different.

The Taiwanese students' parents, many of them engineers, were coming to work at the massive semiconductor plant being built on the northern edge of Phoenix by a Taiwan-based company. The Taiwan Semiconductor Manufacturing Co. plant is pumping tens of billions of dollars into the local economy and helping transform Arizona into a worldwide center for advanced technology.

As the head of a school centered on science, technology, engineering, arts and math, Hughes wanted to roll out the welcome mat for the first TSMC-associated students to arrive in Arizona.

She also needed to prepare for the challenges to come, including ensuring Mandarin-speaking students were achieving academically in English-speaking classrooms and communicating with parents who come from an Asian country where the views and

expectations about homework, learning and discipline differ vastly from the American educational system.

"We knew there could potentially be a language barrier, so we wanted to make sure our teachers and our staff were prepared for what is the best way to welcome them, not only to our school but to our country because this is a huge culture shift for them," Hughes said.

Deer Valley Unified boundaries encompass the TSMC plant, which is being built on desert land off the Loop 303 freeway about 30 miles north of downtown Phoenix.

Over the past few years, the district has received about 350 students from Taiwan whose families are tied to the TSMC plant. Despite the rapid increase, the new Taiwanese students are still a small fraction of the district's student population of 33,000.

A group of about 280 students from Taiwan came in the winter of 2022. Since then, there has been a steady flow of more TSMC-affiliated students, according to school district officials.

The students from Taiwan attend 21 of the district's 42 schools. Many of the Taiwanese families have enrolled students in schools near their homes. But others have sought out schools in the district with an emphasis on technology, including the A-rated Sierra Verde.

"The plant is ever evolving," Hughes said. "So I imagine that we would be getting a lot more families that move into the area."

'We wrap our arms around them': District prepares by hiring more staff

The arrival of hundreds of new Mandarin-speaking students from Taiwan has come at a time when Deer Valley Unified is also experiencing an increase in students who don't speak English from many other countries, largely due to families seeking asylum in the U.S.

Public schools are required to provide students classified as English learners equal access to programs and services under the 1964 Civil Rights Act and the 1974 Equal Educational Opportunities Act. Arizona is the only state in the nation that mandates students classified as English learners, determined through testing, be taught only in English. Under a law passed

by Arizona voters in 2003, English learners are required to spend a set amount of time each day separated from other students while they receive English immersion instruction.

The number of students classified as English learners in Deer Valley Unified has soared from 921 during the 2021-22 school year to 1,470 in the 2023-24 school year, a 60% increase, according to Arizona Department of Education data.

To accommodate the growth, Deer Valley Unified has hired more teachers who specialize in teaching English learners, from 19 before the increase to about 30 this year, said Beverly Kerr, the district's English language coordinator.

"We have 52 languages in our district. But Spanish is the predominant language," followed by Arabic, various Indian dialects and Mandarin Chinese, Kerr said.

The cost to hire additional teachers who specialize in teaching English learners has been covered by additional revenue Deer Valley Unified has received from the state, which is based on average daily enrollment, said Gayle Galligan, a deputy superintendent for curriculum instruction, assessment and programs.

The state does not provide extra funding specifically to teach English learners, but Galligan said she did not believe the district has had to sacrifice any programs to accommodate the increase in English learners, including the TSMC students.

"They're just another group of English language learners for us," Galligan said. "And we wrap our arms around them just like we do any other group of English language learners to provide for them, their learning, their achievement, as well as their families."

English learners attending schools in Deer Valley Unified learn English and transition to mainstream classrooms faster than the state average, Galligan said.

Kerr said the district has one of the oldest Mandarin Chinese dual language programs in the state. Students enrolled in the dual language programs spend half the day learning in English and half in Mandarin.

But the programs, which are offered at multiple schools in Deer Valley Unified, have very few students from Taiwan, Kerr said.

"We have some but not many," she said.

Kerr said that's because the district's new Taiwanese parents want their children to learn English while living in the U.S. What's more, the district's dual language programs are designed for native English speakers who want to learn Mandarin, not the other way around, Kerr said.

'This is how we do things here': School helps families adjust to Arizona life

Sierra Verde has received among the most TSMC students of any of the Deer Valley Unified schools, school officials said. There are currently 49 TSMC students enrolled at the school this year, said Hughes, the principal.

Some of the students from Taiwan have come with their entire families. But others are coping with being separated from family members and living in the U.S. with a parent who works long hours at the TSMC plant.

"A lot of these kids came over with just one of their parents," Hughes said. "So that has been a struggle for littles as well — that they are still missing some family members that are still in Taiwan."

Hughes, sitting in the school's conference room, ticked off some of the ways the school has worked to accommodate the TSMC students.

When the Taiwanese students first began arriving in 2022, the district sent Mandarin-speaking teachers from its dual language programs to help translate during tours of Sierra Verde, which does not have a dual language program.

"We even had some families who were coming hours after they walked off their flight to come to our school because their view of education is in such high regard," Hughes said.

The school had to find Mandarin Chinese-speaking teachers and parents who could explain basic school functions, like how the drop-off and pickup process works, "which can be a pretty complex," Hughes said.

The school also paired students arriving from Taiwan with students who served as "ambassadors" to help them get their footing.

"This was a huge culture change for those families," Hughes said. "School looks different in Taiwan than it does here. Food looks different; songs look different. Everything is different. ... So it's nice to have student ambassadors who kind of take them under their wing and say, 'This is how we do things here.'"

When Taiwanese students got sick at school, the school nurse would call their parents. But the Taiwanese parents often didn't know what to do because they were unfamiliar with the complicated healthcare system in the U.S., which is much different than the single national system in Taiwan.

"They don't even know where is the closest pediatrician," Hughes said.

So the school nurse created a document with a list of local pediatricians, urgent care centers and emergency rooms to hand out, Hughes said.

About 37 of the Taiwanese students are classified as English learners and another 12 have learned enough English to test out of the school's English language learner program, she said.

Before they arrived, Sierra Verde employed only one part-time English learner instructor. The school now employs two full-time English learner instructors and two English learner aides to teach the Taiwanese students and the inflow of students who have recently arrived from Ukraine and other countries, Hughes said.

Hughes said the arrival of the TSMC students has already benefited the school community.

In February, some Taiwanese parents visited classrooms to discuss the Lunar New Year, which marks the start of the Chinese calendar, Hughes said.

Several parents who work for TSMC also attended the school's STEAM night to share their roles in producing microchips with students, she said.

'Expectations in Taiwan are a lot different': Schooling styles differ

Hughes got up and walked out of the conference room through the school's open courtyard to visit classrooms where students not proficient in English were immersed in English language instruction.

Along the way, Hughes passed through the school cafeteria, which doubles as a gymnasium, where students were playing volleyball.

When Hughes entered an English language immersion classroom for seventh and eighth graders, Laura Moore, an English learner specialist, was giving a lesson on prepositions, words such as "to" and "at" that typically introduce a noun or noun phrase.

"Emma's hand goes up first," Moore said, pointing to a girl with a dark ponytail near the front of the class. "Emma, what should we do with that prepositional phrase?"

Emma was one of 12 students from Taiwan learning English in the class. There was also a boy from Ukraine and an Arabic-speaking student from the Middle East.

Emma is not her Taiwanese name. It's Yen-Hsin Chen. The parents from Taiwan submit their children's real names when they register for school. But they pick English names for their children to use, too, Hughes said.

"The parents gave them these English names so that it's easier to kind of integrate in with peers, which has been helpful," Hughes said.

The parents also give themselves English names, so when teachers call, "they go by their English name," Hughes said.

Like other students who share a country of origin or who speak the same language, Hughes has noticed that the students from Taiwan tend to gravitate toward one another.

But she said Sierra Verde's Taiwanese parents don't want their children to hang around only with other Taiwanese students at school.

"Our TSMC parents have come to us and said, 'I want my student talking to English speakers,'" Hughes said. "The parents will say, 'We want them to be separated a little bit and really branch out and start using the English that they're learning.'"

The Taiwanese parents told Hughes that teachers are stricter in Taiwan.

"We had a student last year, and the mom said, 'When is the march?' And I said, 'What are you talking about?' And she said, 'Well, in Taiwan, when they get in trouble, they march around campus. And we were like, 'We don't really do that here,'" Hughes recalled.

In Taiwan, even elementary school students typically spend all day in school and then attend additional "cram schools" in the evenings and on weekends to prepare for high school and college entrance exams that can decide a child's fate.

"We've lost some students because they want more rigor, and for us, we are a rigorous school," Hughes said. "But I think their expectations in Taiwan are a lot different when it comes to homework."

Kerr, the English language coordinator for Deer Valley Unified, said teachers at many of the schools with students from Taiwan hear requests for more homework.

The moms of TSMC families tend to stay at home and "are very much on top of their kids with their homework and things like that," Kerr said.

But rather than assign more homework, she said, teachers encourage parents to have their children get involved in after-school activities and explain that within Deer Valley Unified, the emphasis is on quality over quantity.

"They are always asking for more work, more work, more work, and we keep trying to tell them it's not more work that's important. We don't want them to have more work. We want them to get really good at what we give them," Kerr said.

The requests for more homework reflect a view of education that places high importance on memorization and recitation, which is common in educational systems in many other countries where the focus is on passing exams, said Kerr, who has worked with English learner students for 25 years.

"You go to school to prepare to take an exam, and the exam determines what level of university you go to," Kerr said. "And so your whole Pre-K through 12 experience" is all about "preparing for this university entrance exam."

The same approach was once common in the U.S., Kerr said. But with the rise of Google and instant access to information, the emphasis in education has shifted to critical thinking and problem solving, which is one of the reasons American universities are so valued by international students, she said.

"When you do memorization and recitation, you create really good managers," Kerr said. "You don't create critical thinkers and problem solvers that have superb ingenuity."

At Sierra Verde, the emphasis on problem-solving was on display in a class of first grade English learners made up almost entirely of students from TSMC families.

Shawna Collins, the first grade English language specialist, was teaching the students how to line up properly for lunch. To illustrate the lesson, Collins read a scenario that described some students cutting in line and then asked how the students could have done a better job.

A girl in the front raised her hand and said, "They could have gone to the back of the line."

Collins' face lit up. "I love that you are already problem-solving," the teacher said. "That's amazing."

Appreciating school in Arizona, but preparing for a possible return to Taiwan

April Chang, 34, recently moved to Phoenix from Taiwan. Her husband, Davis Tsai, 39, is an engineer at the TSMC plant.

They have three children. The oldest, Kuan, 7, is in second grade at Legend Springs Elementary School in Glendale, part of Deer Valley Unified. Audrey, 4, is in preschool, and Scott, the youngest, is 1.

Chang said the education system in Taiwan is very rigorous, and teachers are very strict. But she prefers the way students are taught at her son's Deer Valley Unified school. She said the education is more well-rounded.

She also likes the way parents are asked to volunteer at school, which is not the case in Taiwan, she said. Still, Chang has shied away from getting involved. She's afraid her limited English will make it difficult to communicate with other parents.

As for what Kuan likes best about his Arizona school?

"No homework!" he said without skipping a beat during a recent visit to the family's home in a Glendale subdivision.

His mother frowned.

Since teachers don't give Kuan as much homework, Chang assigns her own. Kuan plays in a baseball league after school. When he gets home, Chang gives him workbooks to help him learn how to read and write in Mandarin. She also gives him additional math homework, which he does in Mandarin.

Chang walked over and pulled some of the Mandarin books from a bookcase, which was stuffed with rows and rows of books. She had all of the books shipped to Phoenix from Taiwan. On a spare refrigerator, a calendar written in Mandarin listed the homework Chang expected Kuan to complete that week.

Chang said there is a reason TSMC parents give their children so much additional homework in the U.S. When her husband's contract with TSMC to work in Arizona ends, they will likely return to Taiwan. So, keeping up with students back in Taiwan is important, Chang said.

"In case we are going back, we want to make sure the kids have the same progress as the kids in Taiwan," Chang said.

She said her son was struggling in school in Taiwan, where the educational system is "very high pressure," and the teachers want students not to ask too many questions and "just follow the rules."

"Here, his teachers always say positive things to him, and he's got a lot more comfortable and dares to speak up," Chang said.

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