CODERS program impacts over 2K students in first 3 years

Missouri State University professors Judith Martinez and Andrew Homburg explain how $4 million in grant money is benefiting Ozarks education.

Announcer ([00:03](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

The Missouri State Journal, a weekly program keeping you in touch with Missouri State University

Emily Letterman ([00:10](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

In 2020, the U.S. Department of Education awarded Missouri State University a $4 million grant to expand and improve computer science education programs in rural area schools.

The funding comes from the Education Innovation and Research program. Missouri State received one of only 20 awards from over 1,000 applicants nationwide.

This is how the CODERS Project was born. Since its inception, the project has worked with 40 educators across the Ozarks and impacted more than 2,000 students over the past three years.

I’m Emily Letterman.

Today, we are joined by two guests with the CODERS project, Judith Martinez an assistant professor of World Languages and Cultures at Missouri State and Andrew Homburg, an associate professor of Music.

Judith Martinez ([00:56](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

The idea, the goal of the project is to collaborate so that we can offer teachers how to teach, not in separate ways and in segments, but in a comprehensive way that is more like this century, teaching style.

Emily Letterman ([01:11](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

Martinez says what may have started simply as teaching teachers to code has grown to incorporate the full ideals of a STEAM education – or science, technology, engineering, art and math.

Judith Martinez ([01:22](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

I'm a literature person. I never thought I would be coding. I learned how to code because of this. And, and now, that we can see teachers that are teaching, for instance, speech and debate, but the students have to code a core trial and they have to include music in this, include their literature in this, include the graphic design, include the arts in it, so then it becomes something comprehensive.

Emily Letterman ([01:48](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

The professors say the ability to code opens up doors for rural students that might otherwise have been closed.

Judith Martinez ([01:54](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

I think it's about access. We want the same access and opportunities for everyone. So we understand that our rural school wouldn't have the same opportunities because they don't have the same resources. So now I see my students playing with drones, you know, playing with computers and trying to code something that they just learned in a literature book. We would've never have thought about this because, you know, our goals are something else. And now our students are dreaming about becoming inventors, you know, or they wanna work for the NASA or they wanna, you know, be a coder or, you know, things that they hadn't considered are now part of their lives. Now they're in their radar. So I think this is, this is very meaningful because we're transforming their attitudes and their habits of thinking, and that's what's really gonna make a change and, and in impacting their lives.

Andrew Homburg ([02:45](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

Yeah, the stuff we're using is really cool, and sometimes really cool things are kind of expensive. And so that would, you know, with school budgets being what there are, it would never be a priority for some of the schools that we're working with. So I'm glad we've had that opportunity.

Emily Letterman ([02:58](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

That opportunity is already paying off in dividends – for both the teachers and the students who are learning to think on multiple levels. Homburg and Martinez say they’re amazed by the innovative projects coming out from participating districts.

Andrew Homburg ([03:11](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

They've been writing a lot, and that's been one key practice for us is in order to, to check a student's understanding or to see if they are really thinking strategically or thinking computationally, which is what we hope they will do. A good way to do that is to have them write it out and, and by design then it's interdisciplinary.

Judith Martinez ([03:30](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

One of the goal is logical thinking. So we want the students to think comprehensively, like I've said before, because we don't want them to have segments. You know, I'm good at math, I'm good at writing, but I, or I hate writing, but I love math. We want to change that attitude so they can see learning as a whole.

Andrew Homburg ([03:51](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

One of the coders teachers actually teaches at the same school where my daughter goes, and so I got to wander down during the art show. She also had on display some of the things her students were doing with micro bits, which is one of the technologies that we provide. And they had made automatic dog feeders. They had made hats that lit up, they had made other just really interesting things and creative things that this teacher is taking it and, and letting and being creative with their students and letting their students be creative.

Emily Letterman ([04:21](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

This is the third cohort of the project with teachers from across the Ozarks. Homburgsays some have been with the project from the start and word of mouth is growing.

Andrew Homburg ([04:29](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

Especially from the same district. And that was a choice we made. Once we had a teacher who was teaching fourth grade, well, we tried to pick up the fifth-grade teacher to really have a, a multi-year impact.

Emily Letterman ([04:39](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

Martinez and Homburg say the project has also allowed them to collaborate in ways they never would have thought, bringing together three colleges with expertise in six disciplines.

To learn more about careers in STEAM fields, the CODERS project or how to get involved, visit MissouriState.edu/CODERS.

My guests today have been Judith Martinez and Andrew Homburg, professors at Missouri State University and leaders of the CODERS project.

I’m Emily Letterman for Missouri State Journal.

Announcer ([05:09](https://www.temi.com/editor/t/9BRVcj08OHkhO-g2lgDparT0yOiT6_Pu8HYGnGes9hCY86fNv10UFo-VvTpD0OM2gdQHmumvKQLf6wDivmk_fUo2sS8?loadFrom=DocumentDeeplink)):

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