

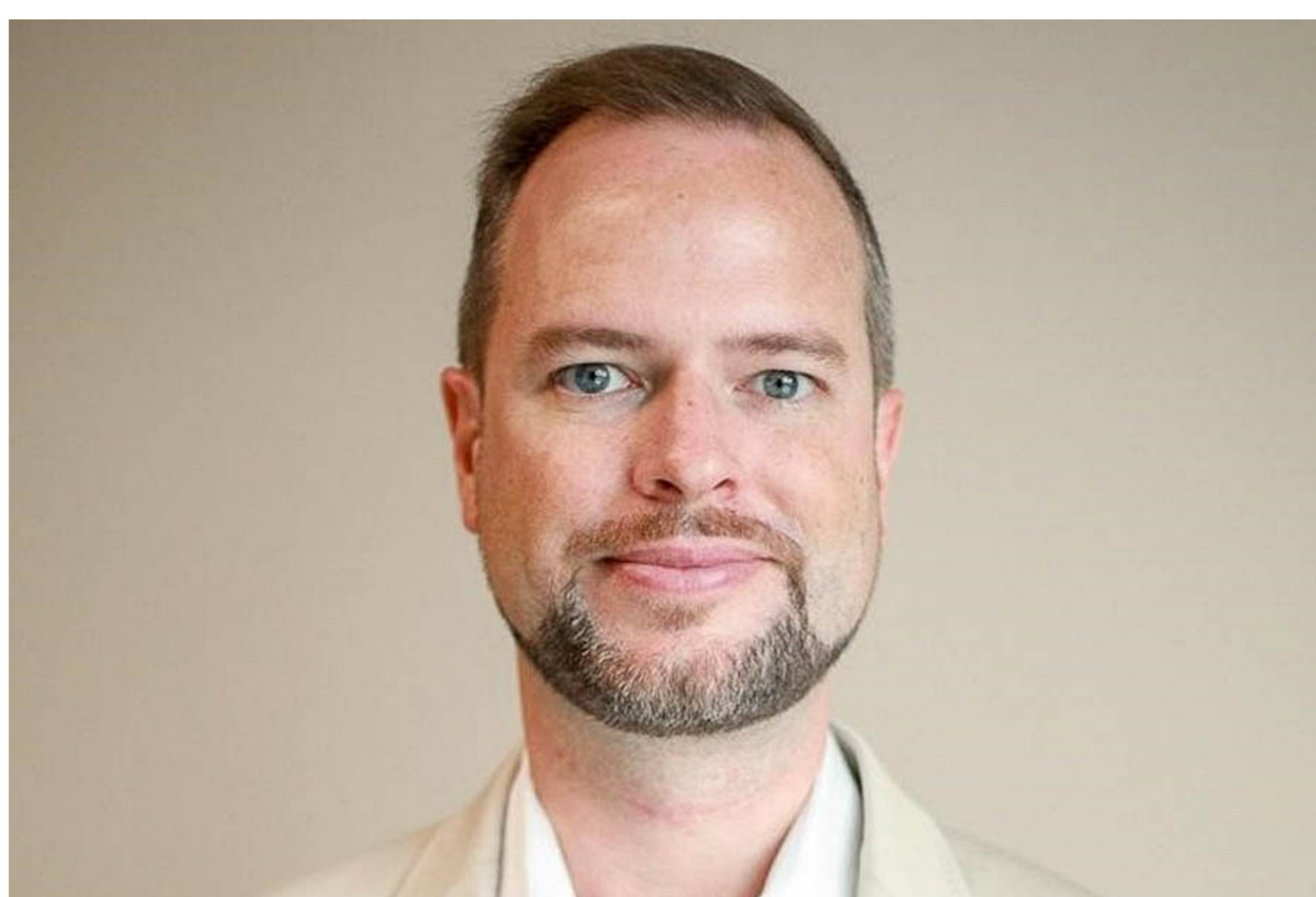


## ARTS &amp; CULTURE

# STEM and language arts — two sides of the same coin?

Spanish Professor Tyler Fisher makes the case for unity between STEM and language arts — and what students can do to make the most out of whichever field they choose.

BY ARIELLE FELDMAN | JUNE 24, 2019



UCF Spanish Professor Tyler Fisher

**W**hat comes to mind when you think of a Google employee? Chances are, someone with superior technical skills and a penchant for coding. And while that may be true for Google's top engineers and designers, a [2013 study](#) by the company found that the higher up employees go on the corporate ladder, the less important tech-savviness is — and the more important are skills such as communication, critical thinking and even empathy.

So what does this mean for college students? Is it worthwhile to focus on developing communication skills? We asked Professor [Tyler Fisher](#) from the [Department of Modern Languages and Literatures](#) what he thinks.

Dr. Tyler Fisher is a [Spanish](#) professor in the [Department of Modern Languages and Literatures](#) and the [Burnett Honors College](#).

#### Do you agree that STEM and language arts are complementary skills?

They can be, yes. Students who develop a narrow specialization in one STEM area could profoundly benefit from developing skills in a second or third language. Doing so would equip them to communicate aspects of their specialist, technical expertise into that target language.

And for their part, students of languages would benefit from acquiring first-hand awareness of one or more STEM disciplines. At the very least, they would gain a working knowledge of the scientific method. I relish the “permission” that language learning grants us to consider any and every field of human knowledge — and to consider those fields at their most fundamental (their technology, lingo and jargon) and their most innovative (how to express the latest developments on the furthest frontier of a STEM field, for example.)

#### Billionaire investor Mark Cuban claimed that there will be a greater demand for liberal arts majors than for programming and even engineering majors in the future. What's your opinion?

There is no need to pit the liberal arts against programming and engineering. The liberal arts, historically, encompassed seven domains of higher education: grammar, logic, rhetoric, arithmetic, geometry, music and astronomy. The well-educated individual sought to master each of these domains in an integrative program. In other words, the complementarity of STEM and languages was already acknowledged at the dawn of university education. If we are now *rediscovering* their complementary nature, it is an ancient recognition that we only misplaced by stereotyping fields of knowledge into unnecessarily restrictive pigeonholes.

#### What do you see a modern language education offering that a STEM education might not provide?

Ultimately, language and culture are inseparable. We cannot understand one very well, if at all, in isolation from the other. The advantage of language learning, for me, can be summed up in one word: access. Access to ideas, to cultures, to the world. Creating access is fundamentally what we do in [UCF's Department of Modern Languages and Literatures](#).

When we teach a language, we create access to other ways of thinking, perceiving and expressing. When we translate, we facilitate access to other peoples, cultures and worldviews. When we guide students through a piece of literature, we render accessible the best that has been imagined across time and place. When we help heritage speakers improve their first language, we offer access to their families' deeper past and present. Acquiring a second or third language is an eminently transferable skill that enhances our students' career prospects, cultural literacy and access to greater opportunities worldwide.

#### What are some things you suggest students do to be the most well-rounded graduates possible — and therefore increase their employability?

Students would do well to take advantage of the years they have during their undergraduate studies, in whatever field, to allow themselves to read and reflect on the nature of the knowledge they are gaining: How rapidly will this knowledge become dated? How might it apply to what they've learned in the past and what they hope to learn next?

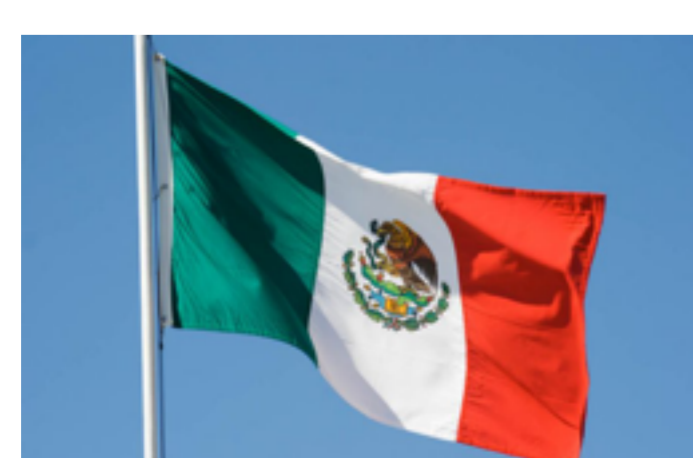
In this vein, I would encourage students to read at least two books – not textbooks – in their field each semester. Even while holding down one or more part-time jobs during their undergraduate years, which many UCF students do, they are unlikely ever to have that amount of time or energy available again for highly intentional reading and reflection. More importantly, the practice of regularly reassessing the inherent limits and latitudes of one's knowledge cultivates a versatility of mind, akin to what I've been discussing here in relation to language acquisition.

Contrary to what the great Oz tells the Scarecrow in *The Wizard of Oz*, achieving a diploma does not confer some kind of substitute for brains. Real fluency, in languages as in any form of literacy, is an ongoing proficiency one must actively maintain even after the B.A. or B.S. certifies one's attainment in a particular subject. Prepare to adapt. Be equipped to innovate.

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