REBOOT

REDEFINING HUMAN RESOURCES' ROLE IN SUPPORTING GREAT STEM TEACHING

Best People Best Results

USHCA

URBAN SCHOOLS HUMAN CAPITAL ACADEMY

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EXECUTIVE SUMMARY

STEM (Science, Technology, Engineering, and Math) teaching and learning in the United States requires rethinking. As the need for STEM skills in the global marketplace grows, U.S. student performance on international indicators lag.[1] Ensuring a great STEM teacher for every student, every day provides a strong vision to reverse this troubling trend. Yet this vision is challenging to implement. Often, school systems' human capital practices work against building a highly effective STEM teaching workforce.

Human Resources (HR) departments in school systems can and should play a critical role in finding, growing, deploying, and retaining great STEM teachers. Unfortunately, today many HR teams function with a compliance and transactional orientation, often enforcing outdated and inflexible policies that negatively impact a school system's ability to attract and retain great STEM teachers. In short, **HR needs a reboot.**

With generous funding from the Carnegie Corporation of New York, the Urban Schools Human Capital Academy (USHCA), a national nonprofit working with school districts around the country to improve human resources and human capital practices, prepared this white paper to outline how HR can redefine its role to support great STEM teaching.

THE U.S. FINISHED 27TH IN MATH AND 20TH IN SCIENCE OUT OF 34 COUNTRIES.

In 2012, 34 countries participated in the Organisation for Economic Co-operation and Development's (OECD) Programme for International Student Assessment (PISA).

HOW CAN HR REDEFINE ITS ROLE?

A strong STEM human capital strategy incorporates what we know about STEM teachers' context and needs into unique goals and strategies to improve talent outcomes. As a central part of their function, HR teams can play a pivotal role in advancing STEM goals by focusing on three key areas: (1) Setting the direction for STEM talent through actionable human capital goals, (2) Leveraging data to prioritize and track human capital goals, and (3) Developing meaningful partnerships within and beyond the school system to support human capital improvement.

I. SET THE DIRECTION FOR STEM TALENT

HR teams are in a key position to align the school system's strategy to improve STEM teaching and learning to actionable human capital goals. At its core, the goals of a strong STEM human capital strategy should take into account the specific context and challenges STEM teachers face to improve in the following areas:

1. **Hiring the highest quality STEM teachers consistently –** Through more targeted and proactive recruitment practices, HR can build and hire an effective, diverse, and robust pipeline of STEM teacher candidates, especially in high-need schools. Some school systems have invested in a dedicated pipeline of STEM teachers. New Visions for Public Schools created a STEM Teacher Residency Program with Hunter College in New York City, and results demonstrate that the program is having strong, positive effects not only on teacher retention, but also on student outcomes.

2. **Growing STEM teachers' skills quickly and continuously –** HR can also support the establishment of effective induction offerings that accelerate the effectiveness of novice STEM teachers while strengthening the knowledge and practice of all STEM teachers. The NYC Department of Education partnered with the New York Academy of Sciences to develop a Scientist in Residence program to deepen teachers' content knowledge, while The New Teacher Center launched the Electronic Mentoring for Student Success Program (eMSS) as a scalable way to support new STEM teachers with content-specific induction.

3. **Deploying STEM teachers to schools and classrooms deliberately –** HR should consider designing policies and strategies to ensure that schools and students with the greatest needs receive equitable access to highly effective STEM teachers. One strategy is to create part-time, flexible roles so that schools can offer a variety of STEM courses to students. District of Columbia Public Schools is offering more flexible, part-time teaching positions in some of their highest-need schools in an effort to retain high-performing teachers.

4. **Retaining the best STEM teachers strategically –** HR can design system-level strategies and programs to keep great STEM teachers while supporting principals in implementing school-based retention strategies. Various recommendations from the field highlight effective yet low-cost strategies, such as teacher recognition programs and the identification and promotion of growth opportunities (e.g., fellowships, internships) outside of the classroom.

II. LEVERAGE HUMAN CAPITAL DATA

To drive STEM improvements, HR must bring data to the table. By collecting, analyzing, and sharing key data on STEM teachers with principals, partners, and stakeholders, schools can more effectively recruit, select, develop, and retain highly effective STEM teachers. Specifically, HR can take the following steps to improve its use of human capital data to improve STEM talent:

- Know what human capital data matters
- Engage stakeholders with data
- Build a data-driven culture

III. DEVELOP MEANINGFUL PARTNERSHIPS

Finally, HR teams should work with others to advance these goals as a critical component to their long-term success. HR can serve as a key partner to multiple stakeholders, such as teacher preparation programs and internal school system teams like Budget and Academics, but most importantly to school principals. As HR's key customer, it is essential that HR teams meet the needs of principals and align systemic efforts to support principals and their instructional learning goals that impact student results.

MOVING TO ACTION

To support this shift, the USHCA has developed a set of customizable tools and examples from the field to best support great STEM teaching for students. If HR teams can take steps to implement these ideas systematically and with fidelity, school systems will see a measurable and dramatic improvement in their STEM workforce, and ultimately, students' STEM learning.