

Campus Safety Training Gets a Digital Map Upgrade

A new tool helps officers practice the geography knowledge they need before working a full campus beat.



A tablet displays an unlabeled campus map with colored building outlines beside a walkway and buildings.

The University of Illinois Division of Public Safety has added a web-based mapping tool called MapInsights to train police officers and community service officers on campus **geography**, according to reporting by Phys.org. The system was built after the department needed to move 11 security guards into community service officer jobs, changing their work from staying mainly in one building to covering a larger **patrol** area called a beat.

That change matters because public safety work depends on knowing the territory. A community service officer is a uniformed public safety employee who may handle duties such as patrol support, safety checks, directions, escorts or nonemergency service calls, depending on the agency. A sworn police officer has taken an oath and has law-enforcement authority under state law. Both roles can require fast, accurate location knowledge. If a caller reports a problem near a building, parking lot or walkway, the worker needs to know where that place is, how to reach it and what other **landmarks** are nearby.

At the University of Illinois, that is a serious memorization job. Phys.org reports that the campus has more than 1,000 buildings and is divided into three north-to-south beats. Before trainees could move

to the next training module, they had to score at least 80 percent on a campus geography test. The old test was a web form that did not save progress, so it worked more like a one-time quiz than a training system. Lt. Ty Ledbetter, who manages the community service officer program and officer training, described the shift simply: “Their jobs completely changed.”

MapInsights changes the task from cramming names into a repeatable practice loop. The program outlines buildings in red. When a user clicks the correct building and identifies it correctly, that building changes to green. Progress can be saved. The system can focus a round on one beat and on either buildings or parking lots. It can show a target, offer a short list of names, and then bring missed locations back again until the **trainee** can recognize them with less help.

That design reflects a training idea used in many skilled trades: practice should show the worker what is wrong, give quick **feedback**, and make the worker repeat the weak spot until the skill improves. In welding, that might mean correcting bead shape. In automotive technology, it might mean diagnosing the same electrical fault until the test steps become automatic. In public safety, one

job skill is building a mental map, which means an internal picture of where places are and how they connect.

The tool also uses research from **cognitive** psychology, the study of how people learn, remember and make decisions. Phys.org reports that MapInsights includes a sense-of-direction **assessment** framework. In plain language, that means it can measure skills such as map reading, **distance** judgment, route memory, orientation in unfamiliar places and mental map formation. Those measurements can help the training adapt to the user instead of treating every trainee as if they learn geography the same way.

For hiring and career preparation, the story is a reminder that public safety jobs are not only about physical presence or authority. They also require local knowledge, clear communication, pattern recognition and comfort with digital tools. A new hire may need to learn agency software, radio procedures, incident reporting systems and the actual layout of the area they serve. Being able to use a training platform well is not the same as doing the whole job, but it can show whether someone is building the knowledge needed to work independently.

The project also shows how job training is becoming more measurable. The old method could tell whether a trainee passed a test. The new method can show which buildings or parking lots a trainee keeps missing, whether progress is being saved, and what kind of **spatial** skills may need more

practice. That kind of data can help a trainer spend less time guessing and more time coaching. It can also raise questions: if a system tracks performance closely, departments need to decide who can see the data and how it will be used in evaluations.

MapInsights was created by Yun Huang, an associate professor whose research focuses on human-AI collaboration and human-computer interaction. Human-computer interaction is the design and study of how people use digital tools, including whether the **interface** is clear, fast and useful under real working conditions. The article does not report that MapInsights improved test scores by a specific amount, so it should not be read as proof that the tool is better in every way. What it does show is a practical change in the training process: a paper-like memory task became an interactive system tied to the real workplace.

Ledbetter said the tool is now part of training for both sworn police officers and community officers in the division. He also sees possible future uses, such as training campus SafeWalks escorts or showing better-lit or more accessible walking routes. Huang sees other possible uses too, including helping new students judge routes between classes. For CTE programs, the main lesson is about the work itself: as jobs change, training often has to become more job-specific, more digital and more connected to the exact place where the work happens.

Written from reporting by Phys.org.

THINK IT THROUGH

1. Should a public safety department rely more on digital practice tools or on ride-along field training when preparing someone for a beat? Defend a balance between the two.

A strong answer: A strong answer should weigh realistic field experience against repeatable practice, feedback, safety, cost and trainee confidence.

2. If MapInsights tracks what each trainee misses, how should supervisors use that information fairly without turning every mistake into a permanent mark against the worker?

A strong answer: A strong answer should address coaching versus punishment, privacy, evaluation standards and the difference between learning data and job performance data.

3. Choose another CTE career area and explain how a similar location-based or task-based training system could improve readiness before a new worker is sent into the field.

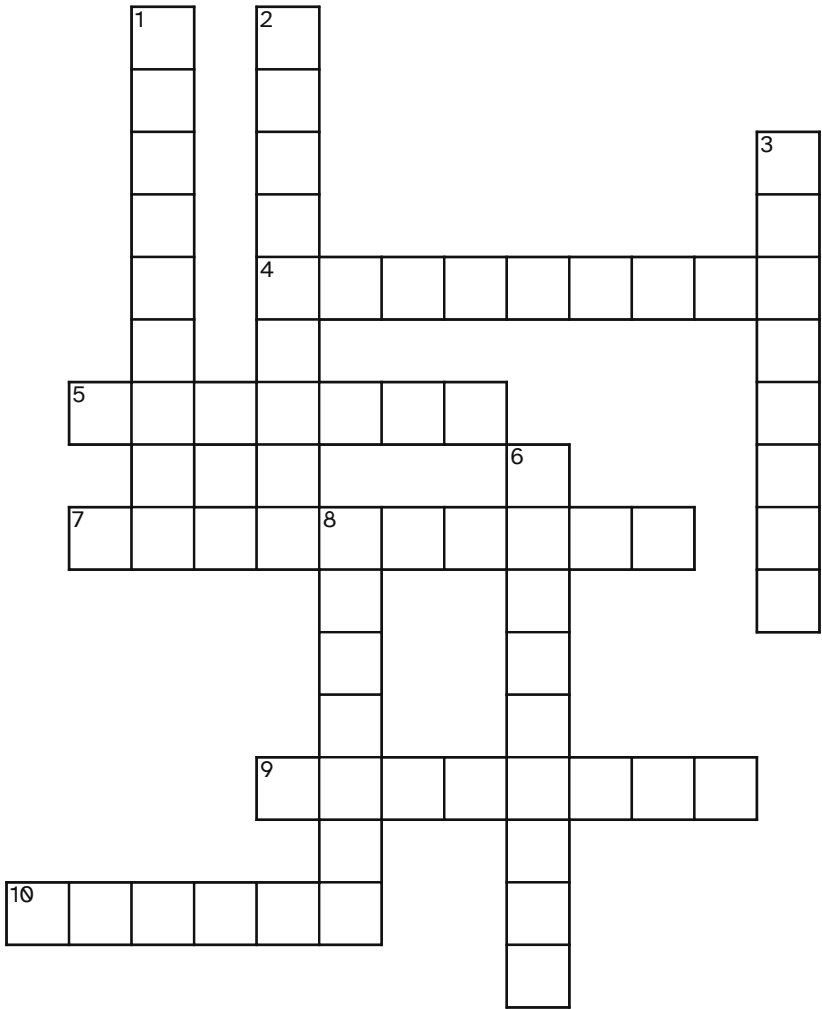
A strong answer: A strong answer should apply the article's training principles to another trade with specific attention to job tasks, feedback loops and limits of simulation.

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ASSESSMENT	COGNITIVE	DISTANCE	FEEDBACK	
GEOGRAPHY	INTERFACE	LANDMARKS	PATROL	SPATIAL
TRAINEE				

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ACROSS

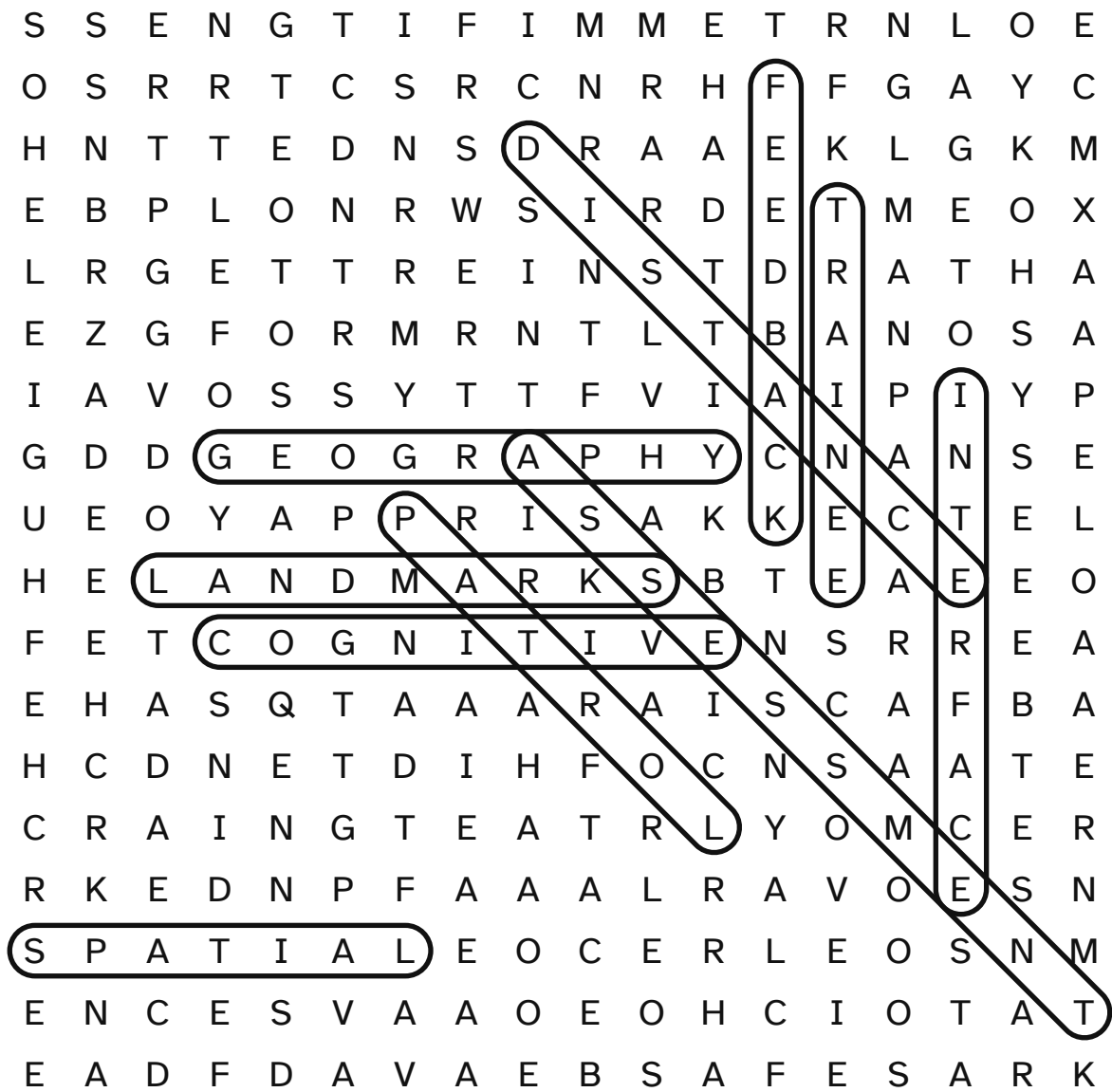
- 4 Digital system component for giving commands and receiving information
- 5 Person learning skills required for a job
- 7 Method for measuring knowledge, skills, or progress
- 9 Amount of space separating two places
- 10 Regular movement through an assigned area to observe and assist

DOWN

- 1 Recognizable features used to identify a location
- 2 Related to learning, memory, and decision-making
- 3 Guidance showing what was right and what needs improvement
- 6 Knowledge of places, their features, and their arrangement
- 8 Related to locations, directions, distances, and connections among places

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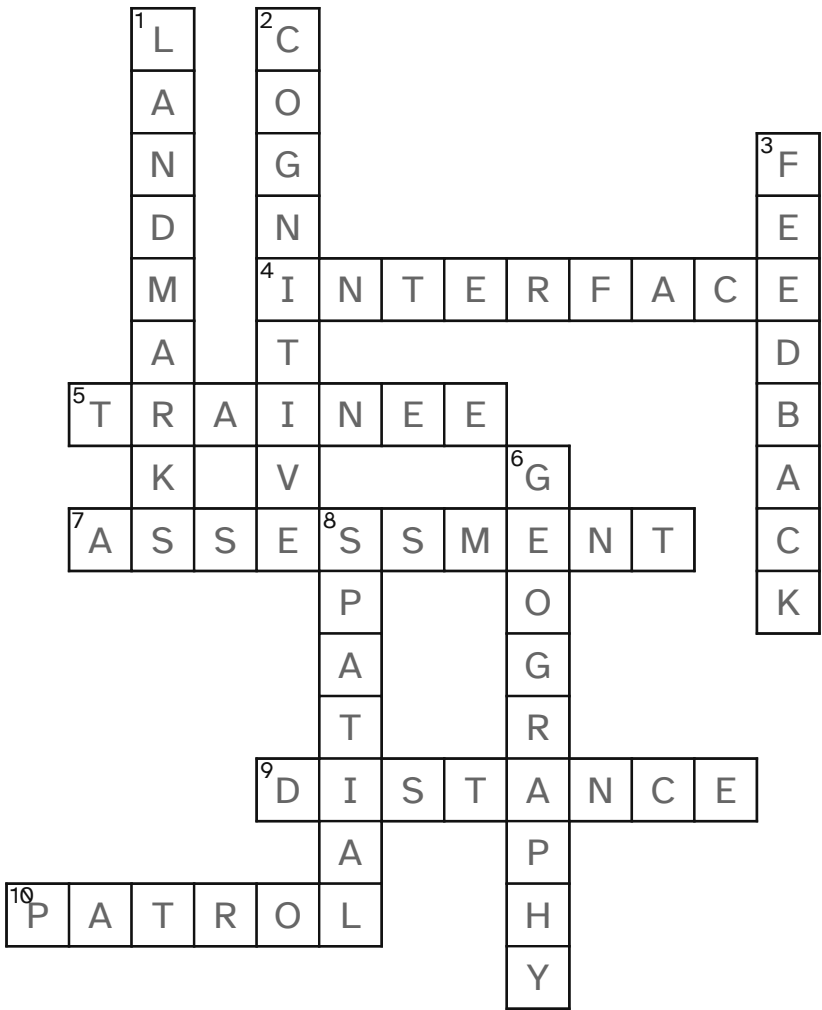
— answer key



ASSESSMENT COGNITIVE DISTANCE FEEDBACK
GEOGRAPHY INTERFACE LANDMARKS PATROL SPATIAL
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— answer key



ACROSS

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Where this came from

This article was written for 3andB from the reporting below. It is not a reprint — the wording is ours and the facts are theirs.

Phys.org

“MapInsights helps police trainees learn the territory”

Published Tuesday, October 27, 2026

Read by us on Wednesday, October 28, 2026

<https://phys.org/news/2026-10-mapinsights-police-trainees-territory.html>

WHAT IS IN THIS PACKET

The article with a note on each question, a word search, a crossword, and the answer key to both.

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