

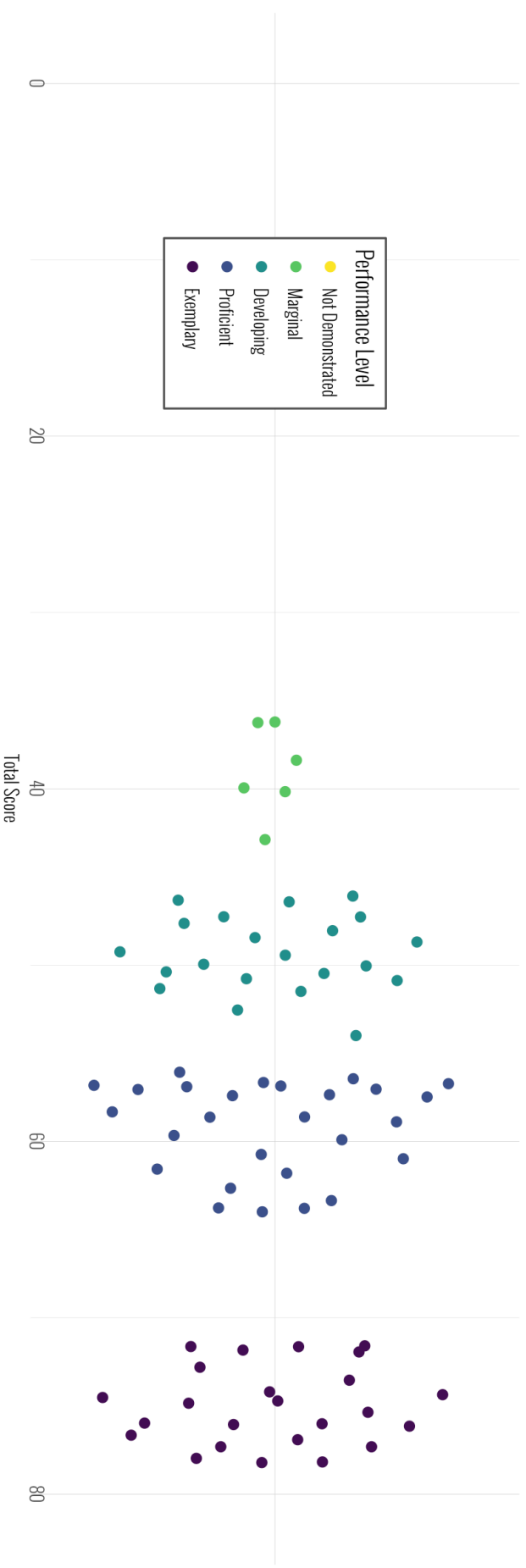
Focus Group: Students

- "Most of our work in senior year focused on technical electives. I mean we did a lot of work, getting to know some pretty advanced stuff, but we only really got to do real project work in like, one course"
- "We had a lot of plug-and-chug and weren't really asked to do anything super new or exciting. It was just break out the calculator and apply the formula."
- "I didn't get to create anything, but I did get to write a LOT of reports"
- "I didn't feel like an engineer in all of my courses. I loved the design course, but it was the ONLY place we got to do anything practical"
- "More students should do the thesis project, I got to do my own research, run my own project and see how a lot of things in engineering science work. Too bad there were only like 3 students out of the entire class that took that course"
- "I'm going into a masters, and I've no idea how to do research."

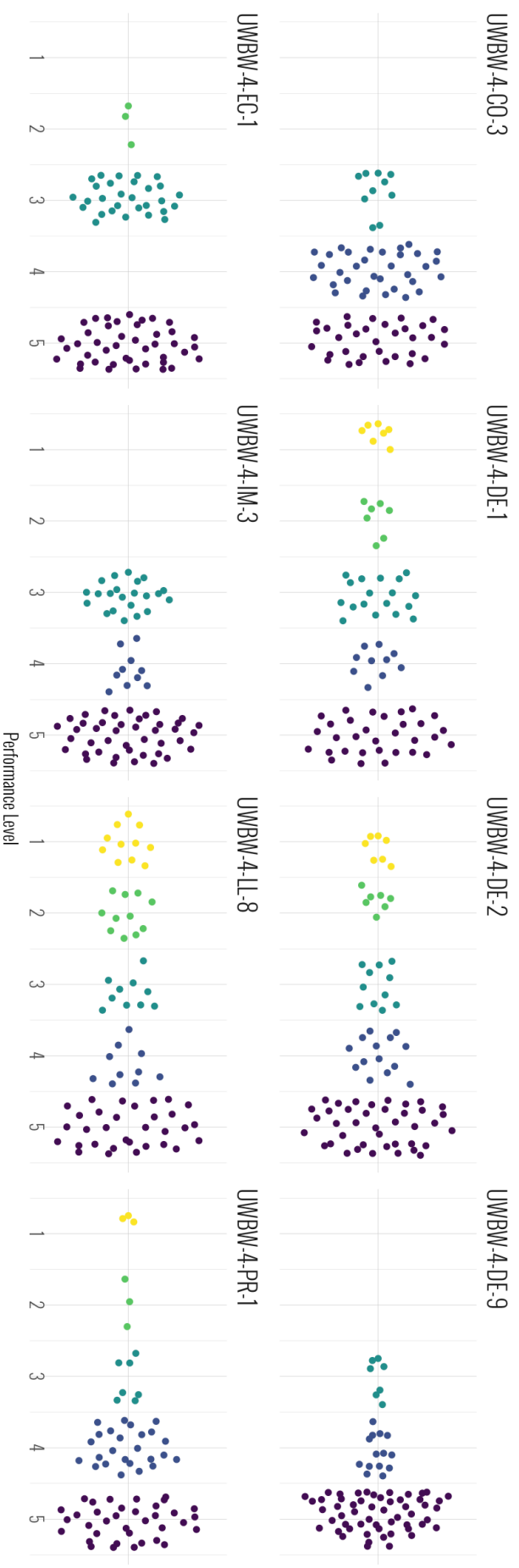
Focus Group: Employers

- "Graduates are great in technical ability, but need to be more well rounded in critical thinking, problem solving, teamwork and other essential skills"
- "I need people that can delve into a problem, compare it to what's out there, and then tell me what they think is right or wrong. Thinkers, not calculators"
- "Technically gifted, able to use identify areas of application, but have difficulty translating idea generation into an actual workable concept"
- "They need more skill in evaluating designs and concepts. They can understand the theory, but can't see how it relates to our customers and why some problems would cause downstream issues."

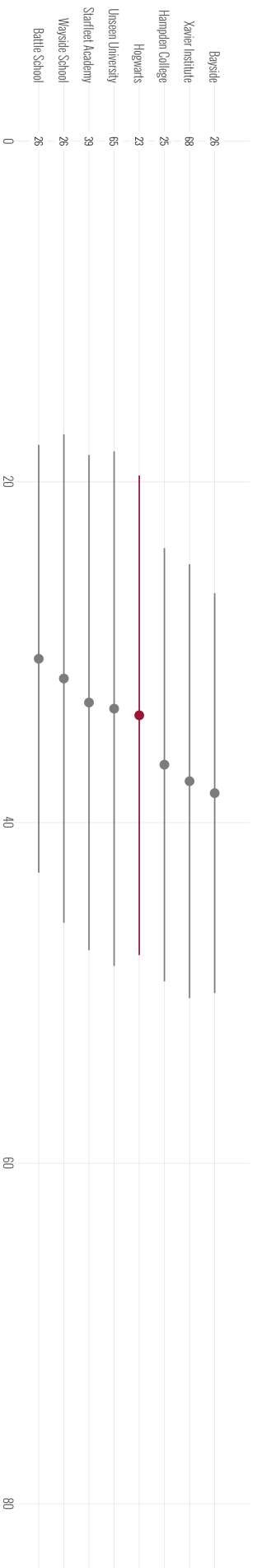
Project Blueprint Total & Criterion Distributions



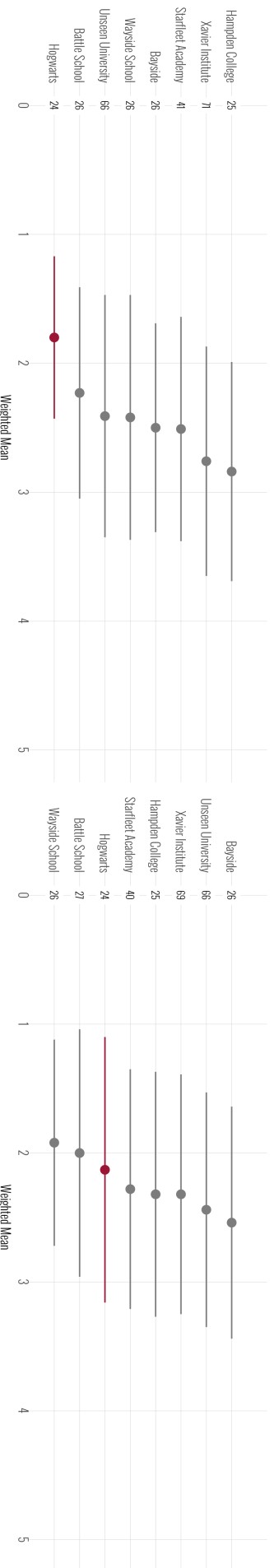
Rubric Criterion



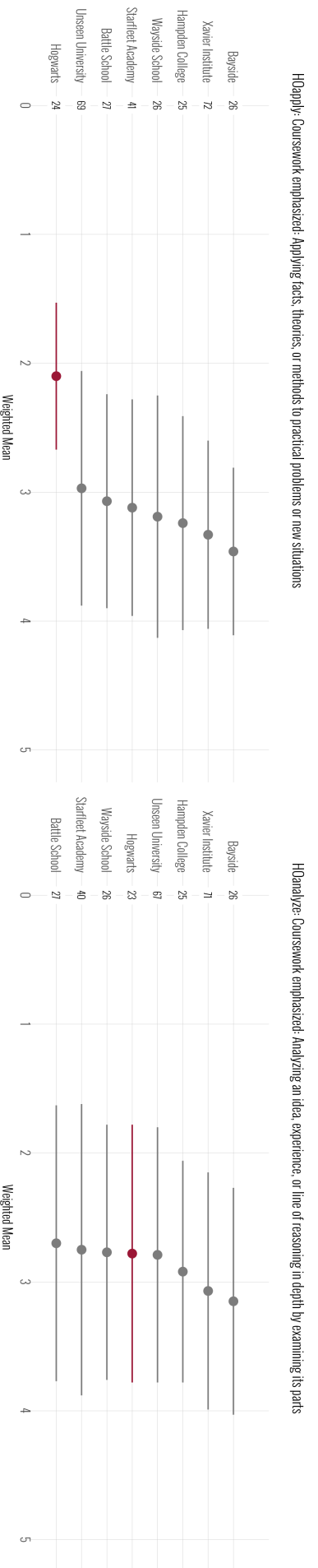
Hogwarts Underwater Basket Weaving NSSE Engagement Indicator Higher-Order Learning Scale Items - Fourth Year Engagement Indicator

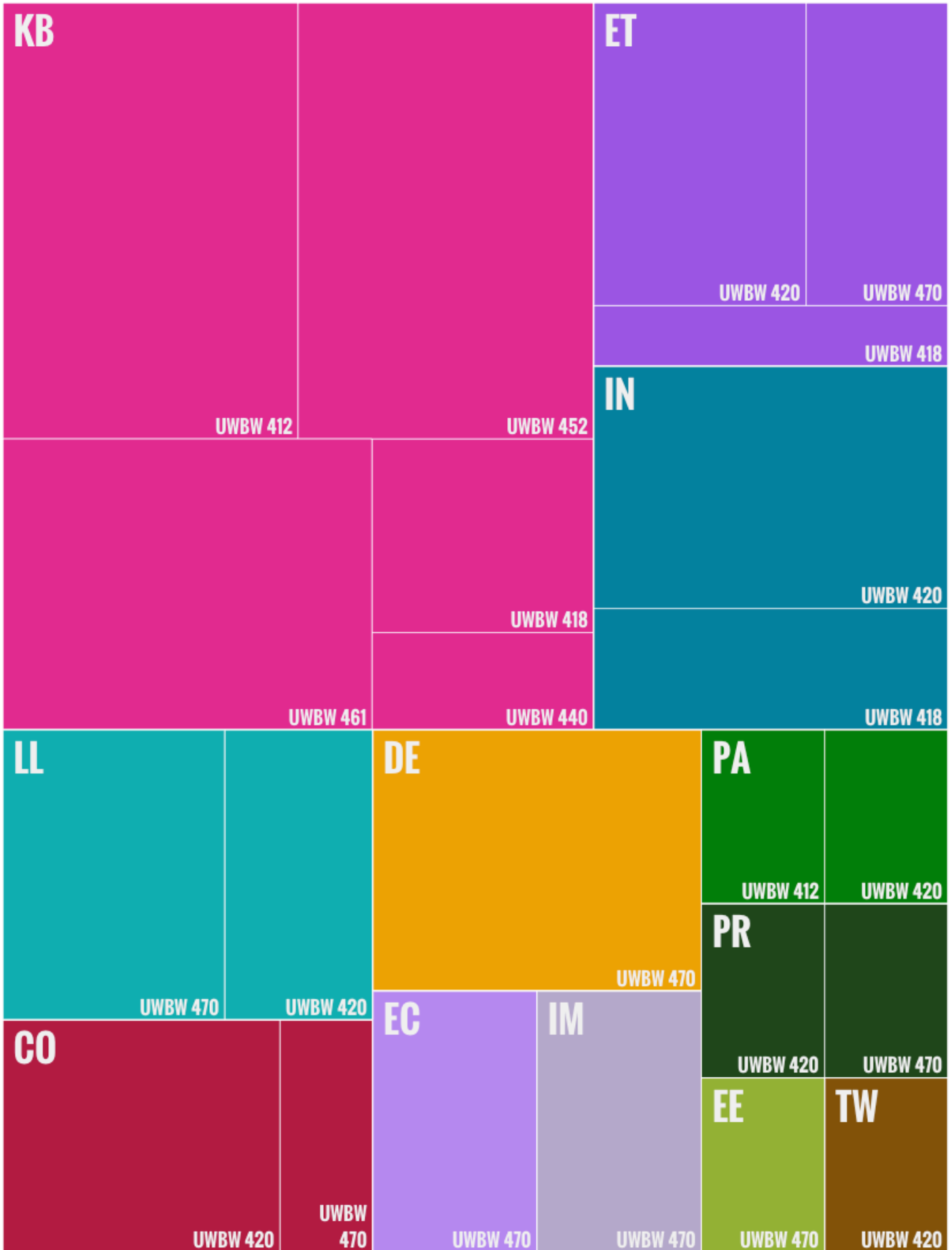


H0form: Coursework emphasized: Forming a new idea or understanding from various pieces of information



H0evaluate: Coursework emphasized: Evaluating a point of view, decision, or information source





Indicator	Description
Problem scope and definition (UWBW-4-DE-2)	Describes problem, requirements, specifications, stakeholders and constraints, and expected engineering design priorities
Value analysis (UWBW-4-IM-3)	Clearly identifies value to all relevant stakeholders.
Information selection and summary (UWBW-4-LL-8)	Identifies and uses range of quality information sources applied to problem needs
Design process (UWBW-4-DE-1)	Selects an appropriate engineering design process based on an accepted model, including tasks and resources required. Identifies appropriate idea generation and decision-making tools for design activity.
Technical project feasibility (UWBW-4-DE-9)	Careful simulation/analysis/simple prototyping shows feasibility of proposal and testing plan, or demonstrates significant progress toward project goal.
Project planning and budgeting (UWBW-4-EC-1)	Plan maps out project with clear milestones, delegation, and justified budget using tools as appropriate.
Social impact (UWBW-4-PR-1)	Social, safety, environmental, economic, regulatory compliance, and professional factors evident in design process.
Writing effectiveness (UWBW-4-CO-3)	Central message is clear and consistent throughout the text consistently following technical report conventions. Errors in vocabulary do not hinder understanding.