A summary of journal articles relevant to advising and assessing capstones

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1. Understanding the Capstone Experience Through the Voices of Students
   Patsy Tinsley McGill
   The Journal of General Education, Volume 61, No. 4

   This paper provides an overview of the purposes of the capstone within the goals of undergraduate education, as well as student opinions about their capstone experiences. Key takeaways that can be obtained from this paper include what students expect from faculty in terms of support, how they would prefer their capstone experiences to be structured, what they might learn from their capstone experiences and how they value the knowledge and skills gained from the capstone.

2. Assessing Student Learning Outcomes and Documenting Success through a Capstone Course
   Paul E. Sum; Steven Andrew Light
   Political Science and Politics, Vol. 43, No. 3
   http://www.jstor.org/stable/25699361

   This paper provides concrete suggestions on how a capstone course can be designed to assess student learning and evaluate if university learning goals are being achieved. A political science course is used as an example of how a mixture of classroom exercises and assessment methods can help improve critical thinking, written communication and oral communication amongst students. The paper also provides examples of how assessment standards for a capstone can be written.

3. Examiners’ reports on theses: Feedback or assessment?
   Vijay Kumar, Elke Stracke
   Journal of English for Academic Purposes, Vol. 10

   This paper analyzes six examiners’ reports to gain insights into the connection and/or potential disjunction between assessment and feedback in examiners’ thesis reports. Although the reports examined were assessments of postgraduate theses, the conclusion that feedback is critical to student success after graduation, as well as the suggestion that examiners “embrace more willingly their dual role as assessor and feedback provider”, could be applicable to the undergraduate context.

4a. BioTAP: A Systematic Approach to Teaching Scientific Writing and Evaluating Undergraduate Theses
   Julie Reynolds, Robin Smith, Cary Moskovitz and Amy Style
Responding to the push to engage more undergraduates in research, the authors of this paper created BioTAP, a teaching and assessment tool. This tool includes a rubric for articulating departmental expectations and a guide to the drafting-feedback-revision process that is modeled after the structure of a professional scientific peer review. The tool can also be adapted for other disciplines, and the paper includes a section that addresses making changes to the tool to meet different goals in other disciplines.

4b. Want to Improve Undergraduate Thesis Writing? Engage Students and Their Faculty Readers in Scientific Peer Review

Julie A. Reynolds, Robert J. Thompson, Jr.
CBE – Life Sciences Education, Vol 10
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3105927/

This paper provides evidence for improved performance of students through the use of BioTAP in a thesis-writing course titled “Writing in Biology”. The findings demonstrate that students enrolled in this course were more likely to earn highest honors than students who only worked one-on-one with their research supervisors and faculty readers. They also scored higher on assessed skills.

4c. “On Course” for Supporting Expanded Participation and Improving Scientific Reasoning in Undergraduate Thesis Writing

Jason E. Dowd, Christopher P. Roy, Robert J. Thompson, Jr. and Julie A. Reynolds
Journal of Chemical Education, Vol. 92
http://pubs.acs.org/doi/abs/10.1021/ed500298r

This paper demonstrates how the use of ChemTAP, the Chemistry Thesis Assessment Protocol, supported the push at Duke University to expand participation in the undergraduate honors thesis. Utilizing assessment methods and structured scaffolding explicitly designed to enhance scientific reasoning in writing, this tool is proven to have helped better distribute faculty resources amongst students and also significantly helped less prepared students better manage their thesis writing.