

Physics Department Reviews

**Comprehensive review and strategic
planning of a physics department:
how to make it work for your
program**

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Department Reviews

RESOURCES AND EXPERTISE

Resources for this talk are drawn from personal experience with 62 departmental reviews and from materials developed by APS and AAPT over several decades for reviews of physics departments, resources developed by MAA for reviews of mathematics departments, and guidance Ted Hodapp, Mike Jackson and I are developing for inclusion in the Effective Practices for Physics Programs (EP3) Project led by APS in collaboration with AAPT.

My personal experience includes:

- contributing to or leading four different physics departmental reviews,
- serving as an external consultant for physics department or science division reviews at 33 other colleges and universities, and
- overseeing 25 departmental or program reviews as an academic administrator.

Department Reviews

Strong and thriving programs

- have clear goals and objectives,
- compile data and outcomes at least annually,
- evaluate and discuss the data and outcomes at regular intervals, and
- make appropriate revisions to programs, goals, objectives and initiatives on a regular basis.

Department Reviews

A review can be a positive and constructive part of sustaining excellence and achieving departmental goals and objectives, including making the program more accessible and inclusive.

Key Features of Department Reviews

- Recruiting external consultants to provide insights and advice.
- Gathering and assessing information about the department, its students and about peer departments.
- Writing a self-study document presenting data and analysis as well as posing questions for advice.
- Hosting a site visit by the consultants and considering their advice.
- Developing an action plan with specific initiatives for both sustaining current strengths and improvement.

Benefits of Department Reviews

- To be purposeful, rather than to drift.
- Getting external perspectives and advice.
- Articulating goals and objectives, establishing initiatives with benchmarks.
- Developing among faculty colleagues a shared commitment to programs and initiatives.
- Recognizing the work of faculty members and staff members.
- Providing a context for the department's requests for resources from internal and external sources.
- Meeting needs for institutional accreditation reviews.

Department Reviews

KEY TERMINOLOGY

Terms commonly used for formal departmental reviews include: External Review, External Evaluation, Academic Quality Improvement Program, Self-Study, Comprehensive Review, and Strategic Planning, among others. We will use “comprehensive review and strategic planning” to emphasize the optimal outcome which is that the department (based on thoughtful and reflective self study with external advice) develops and implements a new strategic plan.

Select a constructive term for the visitors from outside the institution: external visitors, visiting committee, external advisers, external evaluators, external consultants, among others. We will use the term “external consultants” to emphasize that their primary role is advising the department and the academic administration.

Department Reviews

Successful completion of a comprehensive review and associated planning and adoption of initiatives is one aspect of comprehensive ongoing and cyclical assessments and readjustments.

Department Reviews

- A department-centered period of critical reflection to be followed by strategic planning for improvement.
- Identify and plan to sustain successes.
- Identify needed improvements and adopt initiatives to address them.

Department Reviews

Making a review more effective: Phase 1

- Build a positive departmental consensus about the process and involve a diverse group;
- Critically examine the department's current goals and objectives; and
- Engage senior academic leaders in the review and planning processes.

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Making a review more effective: Phase 2

- Recruit external consultants early in the process;
- Gather and evaluate data about students, graduates, programs, and outcomes;
- Learn about peer and aspirant departments, and
- Assess the efficacy of previous initiatives for improvement.

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Making a review more effective: Phase 3

- Write a reflective and analytical self-study document – also identify challenges and opportunities for external advice;
- Host a site visit of external consultants; and
- Think hard about the advice from external consultants.

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Making a review more effective: Phase 4

- Develop a strategic plan with specific initiatives and associated metrics;
- Develop and implement plans for subsequent and on-going reviews of outcomes of initiatives and the effectiveness of initiatives; and
- Tweak the initiatives based on annual reviews as needed.

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Developing a strategic plan

- Articulate goals and objectives;
- Select initiatives: short-term, mid-range and long-term with metrics to measure progress;
- Identify the needed resources; and be sure to
- Include some initiatives that can be done with current resources.

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Developing a SMART strategic plan

SMART goals and initiatives:

Specific,

Measurable,

Actionable/Achievable,

Relevant,

Timely.

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Develop a cyclic review process

- Annually gather key data (metrics/indicators);
- Annually study outcomes of initiatives;
- Tweak or change initiatives to optimize their effectiveness in achieving goals and objectives; and
- Prepare for the next comprehensive review in 5, 7 or 10 years according to departmental and institutional needs and policies.

Department Reviews

Gaining endorsement of institutional leaders for a review and subsequent actions

Consider using some of the following possible outcomes when advocating for resources to support the Review Process and the subsequent strategic plan (1):

- increasing enrollment,
- addressing equity, inclusion and diversity issues,
- improving student learning outcomes,
- strengthening student and faculty recruitment and retention, . . .

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Gaining endorsement of institutional leaders for a review and subsequent actions

Consider using some of the following possible outcomes when advocating for resources to support the Review Process and subsequent Strategic Plan (2):

- serving institutional accreditation goals,
- supporting the general education program,
- serving needs of other departments,
- obtaining increased external funding,
- educating increased numbers of science teachers to meet needs in local schools,
- raising visibility and reputation of the institution and department.

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Develop a Comprehensive Time Line

It may take more than a year, plan ahead.

Start with the date you want to finish the project and the date for a site visit by external consultants and work back from there in your planning.

Launch departmental discussions to recruit commitments from all members.

Recruit and get advice from the external consultants early regarding the process

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Recruiting External Consultants

- Discuss what perspectives and insights from such consultants would be most beneficial.
- Identify possible candidates and consult appropriate administrators.
 - A team is better than an individual.
- Recruit consultants early, 6-8 months in advance of the site visit, in part based on whether they can come when needed.

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Develop a Leadership/Coordinating Group

The tasks are many – delegation and sharing are essential.
Draw from a variety of perspectives to retain credibility with
colleagues in the department.

Emphasize inclusiveness.

Be mindful of power dynamics and conflicts of interest.

Consider including staff members and students.

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Appendices and Templates

Timeline for a comprehensive departmental review

Topics and questions to investigate

Sample outline of a self-study

Engagement agreement for an external consultant

Sample outline of an external consultants' report

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Consult Resources

Colleagues in other departments at your institution,

Colleagues in other physics departments,

The forthcoming EP3 guide,

AAPT/APS Resources, and

MAA Resources.

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REMEMBER

The Goal IS NOT to develop a forgettable doorstop and then quit in exhaustion.

The GOAL IS to become a better (more successful and more inclusive) department.

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I'd be happy to take any questions.

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