

INTERDISCIPLINARY STUDIES IN GENERAL EDUCATION GUIDELINES

The Task

This report has been prepared by a task force of the Association for Integrative Studies, and has been endorsed by the Board of Directors of the Association (February 13, 2000). Members of the task force, listed alphabetically, are Joan Fiscella (chair), Cheryl Jacobsen, Julie Thompson Klein, and Marcia Seabury. Michael Field serves as liaison to the AIS assessment taskforce.* With consultation from Don Stowe, chair of the AIS task force on assessment, the Guidelines task force has revised the document to include a section on assessment. The AIS Board of Directors endorsed the revision October 3, 2002.

The Association for Integrative Studies, a professional organization for educators in interdisciplinary education and scholarship, commissioned the task force on interdisciplinary general education accreditation guidelines in response to a request from the Association of American Colleges & Universities (AAC&U). There is no authorized accrediting body for interdisciplinary education, and this organization is not in a position to act as one by overseeing site visits by teams. Our task was to develop appropriate criteria of accreditation for interdisciplinary general education. The criteria we offer are advisory. Nonetheless, the recommendations of the task force may be taken as state-of-the-art counsel that can be published and endorsed by other professional groups such as AAC&U.

The need for clear criteria of interdisciplinary accreditation looms larger today, as interdisciplinarity has become a major dimension in recent general education reforms. Although individual courses are included in our compass, the emphasis is on programs. By “program,” we mean at least two courses. By “interdisciplinary,” we mean involvement of more than one disciplinary perspective and explicit attention to the question of integration. Defining accreditation criteria is one part of a multi-pronged approach that will complement other future documents regarding site visits and assessment methods.

The Context

The past two decades have been a time of robust reform in general education. In the literature on general education, the most consistently cited failure is lack of coherence. Coherence, James Ratcliff (1997) explains, allows for many kinds of connectedness, including the role of disciplinary knowledge, languages, and methodologies across liberal arts and sciences. Coherence also connotes integration of content and skills, connection-making across general education and the major, the capacity for higher order skills of integration and synthesis, and the widespread blurring of disciplinary boundaries. Three monographs in a new series on *The Academy in Transition*, sponsored by the Association of American Colleges and Universities, establish the context of current reforms.

In *General Education: The Changing Agenda* (1999), Jerry Gaff identified thirteen major trends. Renewed emphasis is being placed on liberal arts and science subject matter, extending into professional and pre-professional programs. Greater attention is being paid to fundamental skills, including computing. Core programs are being strengthened and standards raised. Interest in interdisciplinary learning and integration of knowledge is extensive. The study of diversity in the U.S. is drawing on new scholarship on cultural identities. Global studies programs have expanded, and international themes are being incorporated across the curriculum. The moral and ethical dimensions of every field of study are being explored. The first and senior years are being targeted as crucial points in undergraduate experience. General education is being extended into advanced study and across all four years of college. There is heightened interest in active, experiential, technological and collaborative methods of learning. New approaches are being taken to assess learning outcomes, with feedback channeled into improving courses and programs. Further administrative support is being given to faculty to collaborate in curriculum planning, course development, and teaching of core courses.

Interdisciplinarity is not simply one more item on this list. It intersects with every trend that Gaff identified. Integration, synthesis, and cohesion of learning, Gaff exhorts, are hallmarks of the purpose of general education. The teaching of liberal arts and science subject matter is being updated to include new interdisciplinary research. Skills are being infused into the teaching of content, and synthesis is being targeted as a primary skill. The teaching of diversity and international themes, as well as moral and ethical issues, draws on new scholarship in interdisciplinary fields. First-year seminars often feature integrative study of themes and problems, not the disciplines per se. Senior capstone seminars afford opportunities to reflect on the connections of both majors and general education to other disciplines and to the "real world." Four-year programs often move from a multidisciplinary overview to a higher-level synthesis. Collaborative learning and other innovative pedagogies encourage integration and connection making. Assessment is becoming more attentive to interdisciplinary outcomes and new interdisciplinary understandings of the learning process. And, the needs of interdisciplinary teaching are being recognized in faculty development programs.

Interdisciplinarity has become more important in the undergraduate curriculum, because the need for integration is pervasive. "The entire ethos of the contemporary world," Carol Geary Schneider and Robert Schoenberg wrote in another monograph in the series, *Contemporary Understandings of General Education* (1998), "calls for the capacity to cross boundaries, explore connections, move in uncharted directions." American higher education is in a period of transformative change. Integration of learning is central to this change, not only in general education but also in the rapid growth of interdisciplinary majors and minors. Multidisciplinary and integrative learning create awareness of relationships, tensions, and complementarities among ideas and epistemologies. They generate links among previously unconnected issues, approaches, sources of knowledge, and contexts of practice. Increasing interdisciplinarity of both student interests and faculty behaviors underscores the importance of preparing students, in Schneider and Schoenberg's words, "to navigate a kaleidoscopically complex world."

In a third monograph in the series, *Mapping Interdisciplinary Studies* (1999), Julie Thompson Klein identified seven major trends in integrative approaches to general education today: replacing distribution models with interdisciplinary cores; insuring a broad overview of knowledge; clustering and linking courses; building learning communities; including diversity and globalism; incorporating knowledge from interdisciplinary fields; introducing innovative pedagogies. According to theorists Klein and William Newell, among others, interdisciplinary approaches in general education are the appropriate curricular response to the explosion of knowledge and the evolution of disciplinary boundaries implicit in the general education trends noted by Klein. Interdisciplinary approaches in general education also hold great promise for developing intellectual skills necessary to increasingly complex modes of analysis and problem solving precisely because they can achieve a more holistic perspective through the emphasis on connection and integration.

The Practice of Interdisciplinary General Education

Of the 410 interdisciplinary undergraduate programs described in Edwards (1996), 96 -- approximately 23% -- are identified as general education. Davis (1995) identifies approximately 30% of his list of representative team-taught interdisciplinary courses as general education. Interdisciplinary general education programs take several forms and occur at several places in the curriculum. They frequently appear as "core courses," "integrated studies" or "interdisciplinary studies." They also may be sequenced with introductory, mid-career, and concluding activities in general education. New reforms in general education reflect variations in student learning and clear assessment of corresponding curricular goals. Students also benefit from the challenge of synthesizing learning through essays and journal keeping, capstone and cornerstone courses, and integrative experience in cooperative and service learning. Whether as "cornerstone" or first-year seminar, as part of a four-year core, or as capstones or senior seminar, interdisciplinary general education approaches share several common features. They frequently are organized around themes, problems or issues, cluster disciplines in knowledge-domain offerings [such as humanities, social sciences, natural or life sciences], and are team-designed and/or team-taught with faculty from several disciplines participating.

Task Force Recommendations

The purpose of the recommendations is to encourage interdisciplinary programs and give guidelines for conditions that support these programs. The recommendations can also be used as criteria for evaluating existing programs in a review process. In fact, there are many creative ways of implementing interdisciplinary general education programs, and it is important to develop them within the context of each institution's mission and resources. We address some general education issues that are known to be effective, and we note them because they particularly support interdisciplinary general education. Some features of strong general education may be lacking in this report, but this should not be read as a lack of support for them. Rather it is a by-product of our focus on interdisciplinary general education.

We acknowledge the Association of American Colleges for its *Program Review and Educational Quality in the Major* from which we adapted the structure of the recommendations. Our recommendations are organized in six major categories: goals, curriculum, teaching and learning, faculty, administration, and assessment. Each of the five categories includes a statement which sets the direction or highlights principles. Following the statement is a set of questions to help evaluators review documents, interview members of the institution or otherwise elicit indicators that the institution and/or general education interdisciplinary program are meeting the recommended criteria. These questions suggest multiple ways of achieving the principles embodied in the statement.

Category A: Goals

Interdisciplinary general education programs should have statements of goals ~~which~~ that explicitly address interdisciplinary or integrative features of the program. Although the goals may overlap the goals and outcomes of other strong general education programs, they will address distinctive aims of interdisciplinary programs. Effective, enduring interdisciplinary programs will have goals that are consistent with their own institution's mission and, as appropriate, consistent with pertinent state or regional educational objectives and guidelines for best practices nation-wide.

1. An effective interdisciplinary general education program will have explicitly integrative goals which are communicated to all students, faculty, and staff.

- What are the distinctive goals of the program?
- Does the program aim explicitly at helping students to look at issues and problems from multiple perspectives?
- Does the program aim explicitly at helping students to compare, contrast and integrate perspectives from multiple disciplines, thereby gaining a more comprehensive view?
- How were the goals determined? Were representatives of the constituent disciplines consulted in developing the interdisciplinary goals?
- In what ways are all faculty and students made aware of their interdisciplinary dimensions? (For example, do the institutional catalog and the program informational bulletins include integrative goal statements? Are these given to all students, faculty, and staff?)

2. The goals and outcomes of an effective interdisciplinary general education program will be consistent with the institution's goals and its mission.

- In what ways are the distinctively integrative goals and outcomes of the program appropriate to the institution and to the program itself?
- What evidence is there that the distinctive goals are feasible given available resources and personnel?
- Are these goals stated in terms that permit judgments about the extent to which they are realized?
- What evidence indicates that intended outcomes are being achieved?
- What procedures are in place for collecting and analyzing evidence?

3. An effective interdisciplinary general education program regularly reviews its goals, its curriculum, and the courses that it offers. In addition, the program has a process for regularly monitoring progress toward achieving integrative goals and outcomes, curriculum, and courses. (See Category F below.)

- What process is used for reviewing interdisciplinary or integrative goals, courses, and curriculum structure?
- How does the program monitor progress toward achieving these goals?
- In what ways are program faculty involved in these processes? What occasions provide for collaborative reflection among faculty, students and administrators?
- During the review process, do the units of the institution who have a stake in the content and/or staffing of the program provide adequate consultation?
- What have been the results of these processes since the last program review?
- What, if any, modifications have been made recently in program goals or in means of meeting these goals?
- What documented improvements have resulted from these modifications?
- Are there problems that have not been addressed? If so, what are they?

Category B: Curriculum

Interdisciplinary general education programs take into account the developments documented in strong general education programs, such as attention to intellectual skills, multiple modes of inquiry, the social and international context, self-knowledge and values, and integration of learning. Particularly important, for interdisciplinary programs, however, is having a plan for the development of the curriculum that carefully focuses on its integrative and coherent features.

4. An effective interdisciplinary general education program shows coherence, although there are alternative ways of achieving it. The issue of coherence should consider at what stage undergraduate students take courses in the program, whether there are courses available for students at both the lower and upper divisions, and how students perceive coherence. It should also consider the relationship of individual disciplines to the interdisciplinary general education program, the relationship of general education and the major, and the integrative coherence of all elements within individual courses.

19. What documentation gives evidence that the curriculum plan is based on a well-defined intellectual agenda that addresses interdisciplinarity?
- What creates coherence in the program? What evidence indicates it is being achieved?
 - If coherence is addressed through sets of common core courses, what are the courses? How are the core courses connected?
 - Are some courses organized around designated topics, themes, issues, ideas, problems, or questions?
 - In what ways does the program span the entire bachelor-level education, or does it focus on lower division courses? If it spans upper and lower division work, what is the relationship of beginning, middle-range, and capstone courses within the program?
 - Does the program provide for a sequence of interdisciplinary skills, from simple to complex?
 - If the interdisciplinary education program has other dimensions, such as a distribution of disciplinary courses, is there a clear and effective working relationship among the different components? What is that relationship? Are there opportunities to reflect on the relationship of the disciplines?
 - In what ways do the separate parts of the curricular structure cohere? What indications are there that the students perceive connections among separate courses?
 - What evidence indicates an effective working balance of breadth (exposure to multiple disciplines), depth (knowledge of pertinent disciplines), and synthesis (opportunities for integration)?
 - What are the participating disciplines and interdisciplinary fields? Is the spectrum of courses narrow or wide?
 - Are the number and extent of interdisciplinary experiences sufficient to achieve curricular goals?
 - How do other units of the institution help make connections with the interdisciplinary general education program themes and content?
 - How are pertinent links with the community incorporated into the curriculum?

Category C: Teaching and Learning:

Although no unique pedagogies have been tied to effectiveness in interdisciplinary education, many of the approaches to pedagogy that have proven potent in general education are particularly useful in encouraging interdisciplinary and integrative learning. Students should learn to make connections across materials in their interdisciplinary general education courses, across courses in the program, and across courses more broadly, including courses in their major. Integration will be an ongoing process throughout the semester and the undergraduate career. Knowing the students and providing opportunities for student input and feedback will aid this process, as will both formal and informal assessment methods.

5. Integration in interdisciplinary general education is a function of both how faculty teach and how students learn. In other words, it is the responsibility of both students and faculty. An effective interdisciplinary general education program provides strategies and opportunities for students to integrate their learning. Faculty will facilitate interdisciplinary integration through modeling and pedagogies of active learning as appropriate to their courses.

- Where is the concept of interdisciplinarity explained -- in an introductory course and unit or elsewhere? Are students acquainted with the strengths and limitations of the interdisciplinary approach?
- Do the faculty in their classroom teaching, assigned reading materials, and assigned learning activities focus explicitly on the process of integration? What are the strategies for students to explicitly integrate their learning?
- How do faculty model integration? Team-teaching can be one effective strategy. What other strategies have they developed?
- How do faculty serve as mentors helping students to acquire strategies for integrative thinking?
- What particular integrative approaches, such as systems theory, feminism, etc., if any, do faculty use?
- How do students actively engage in connection-making strategies such as juxtaposing, comparing and contrasting disciplinary perspectives? Do they actively practice these activities in class and through assignments, rather than remaining as passive observers to the integrative thinking of faculty?
- How do students explore the connections among their interdisciplinary courses and their major courses?
- How do students make connections with their lives beyond school, now and in the future?
- How do students use senior capstone seminars, essays/theses, research, and/or projects for synthesis?

6. In the selection of pedagogies ~~which~~ that support integrative learning, an effective interdisciplinary general education program considers student developmental stages, student life, and the particular institutional culture. Some sample options are included in the following:

- To what extent are faculty using pedagogies that are effective in developing students' capacities for integrative learning?
- Do the faculty use alternative strategies such as integrative portfolios to promote connected learning?
- Does the program have a living-learning component that helps students connect their general education with social, cultural, and ethical issues?
- Does the program have collaborative projects or learning communities that support integration?
- What other pedagogies have been effective in supporting integrative learning?

7. Faculty and administrators evaluate learning and teaching in a systematic way on a regular basis in an effective interdisciplinary general education program.

- How are interdisciplinary learning and teaching evaluated?
- What criteria are used for learning assessment? Are they appropriate for integrative learning?
- Are multiple learning assessment devices used, such as individual or group projects, presentations, self- and peer evaluations, papers or creation of works in other media, or tests?
- What are the criteria used for teacher evaluation? Are they appropriate to teaching in an interdisciplinary program?
- Does the standard institutional course evaluation form have the necessary flexibility to address distinctive features of interdisciplinary teaching/learning? Alternatively, does the interdisciplinary program have its own form or supplement or are faculty educated in making appropriate instruments?
- Are multiple teaching assessment devices used, such as teaching dossiers, peer evaluations, student evaluations, and reviews of syllabi?
- How are evaluations taken into account in making teaching assignments?
- When weaknesses and problems are identified, what kind of support are faculty given to make improvements?

Category D: Faculty

All institutional faculty have some responsibility for general education, either through participating in the program or helping students make connections between courses in their majors and interdisciplinary general education. Faculty participating in interdisciplinary education programs, in particular, need support in areas of faculty development, promotion and tenure processes, and incentives for participation in the programs.

8. Responsibility for overseeing interdisciplinary general education in an effective program is shared by faculty representatives from across the units of the institution.

- Is there a committee composed of representatives from across the departments or colleges and library which oversees liaison with their units, faculty recruiting, curriculum, and policy?
- Is there an ongoing, effective liaison between the interdisciplinary general education program and the departments whose faculty participate?
- Are faculty from all participating units involved, or at least represented, in administrative decision making?
- Is the library an important part of the process of consultation on curriculum development?
- Does the leader keep the campus informed about pertinent recommendations of interdisciplinary, disciplinary, professional and educational groups regarding interdisciplinary general education?

9. In an institution with interdisciplinary general education programs, departmental, college, and university policies and practices support faculty in engaging in interdisciplinary teaching, scholarship, and service.

- Is the institutional culture supportive of interdisciplinary general education, so that chairs willingly allow their faculty to participate?
- Does a general education director have leverage of some kind to obtain faculty participation? (Illustration: funding to reimburse departments for adjunct replacement.)
- What opportunities and resources for collaboration are available to support the development of interdisciplinary programs? Examples include research projects, papers, presentations, team-teaching, and other team-building activities.
- Does the institution manage its team-teaching plan(s)/option(s) so that it maximizes interdisciplinary and collaborative work without unduly increasing class size, while being financially sustainable for the university?

10. In an effective interdisciplinary general education program, hiring procedures welcome faculty with teaching and research interests which cross traditional disciplinary lines.

- Do position announcements inform applicants of the opportunity to teach interdisciplinary general education courses? Is it discussed in interviews with job candidates?
- Do departments have some leverage in obtaining faculty lines if either the new hire or current members of the department will do interdisciplinary teaching?

11. Procedures are in place to assure continued and substantial participation by full-time faculty, both tenured and non-tenured, in an effective interdisciplinary general education program.

- What indications are there of a supportive institutional culture (see #9 above)? Are interdisciplinary studies treated as significant in the academic culture?
- Is cross-listing of courses actively encouraged or tolerated?
- Do the policies provide sufficient flexibility to allow for shifting faculty participants among interdisciplinary teams? What incentives encourage flexibility?
- Are both junior and senior faculty involved in the interdisciplinary general education program?
- Are faculty who teach part-time in the interdisciplinary general education program able to count it in-load, rather than overload?
- Are there suitable options for faculty appointments? These might include joint appointments between a department and the interdisciplinary program or "fellows" in the interdisciplinary program (partial or full appointments to the interdisciplinary program for a specified length of time).

12. To actively encourage faculty participation in an effective interdisciplinary general education program, there are opportunities for professional development in interdisciplinary and collaborative work.

- What opportunities exist for faculty seminars and workshops, either during the academic year or during summers?
- What opportunities do faculty have to acquire either externally or internally funded grants for faculty development, which might be used for interdisciplinary conferences, for example?
- What opportunities do participating faculty have for mentoring, either informally or through formal, systematic arrangements?
- Do teams have opportunities to formally reflect on their experiences?
- If the institution has a teaching and learning center, how does it support the interdisciplinary general education program's needs?

13. In institutions with an effective interdisciplinary general education program, promotion and tenure criteria support faculty in engaging in interdisciplinary teaching, scholarship, and service, and participating on interdisciplinary teams.

- Do promotion and tenure forms explicitly invite mention of interdisciplinary activities?
- Does the promotion and tenure assessment take into account the goals of the program within the institution, as well as implications of participation in interdisciplinary programs as distinct from what is expected within a particular discipline? For example, publication outlets, teaching loads and service opportunities may differ from what is expected within a single discipline.
- When a faculty member participates in interdisciplinary general education outside his/her own unit, are there procedures whereby voices from outside the faculty member's immediate unit (e.g. as representative of the other assignment in the interdisciplinary program) can have input into the process?
- If any faculty appointments cross divisions, what assurances are in place that the arrangement recognizes, supports, and rewards the faculty member's status?
- If a faculty appointment is between the interdisciplinary general education program and a disciplinary unit, what special provisions are in place to assure an equitable process?

14. A system of rewards and incentives helps encourage faculty to participate in or develop interdisciplinary general education programs. These rewards may be of various kinds.

- Are faculty in interdisciplinary general education programs invited to serve on important college or university committees as indications of the value these faculty have to the institution?
- Do annual salary reviews recognize faculty participation in interdisciplinary general education programs?
- Are processes and criteria for rewards and incentives for faculty and administrators in interdisciplinary general education programs comparable to those in other areas?

Category E.: Administration

Effective administration of interdisciplinary general education programs is necessary to support faculty teaching and student learning. Effective administration includes a centralized leadership role as well as representation from among faculty full-time in the program and those whose appointments are shared with other departments. No one model is recommended, but a number of characteristics should be evident.

15. In effective interdisciplinary general education responsibility is in the hands of an appropriate leader(s), rather than being dispersed across units whose primary loyalties are to their disciplines. (But also see #8 above.) These questions address the variety of administrative structures and practices:

- Is there a director of general education, an associate dean of undergraduate studies, or other administrator who oversees interdisciplinary general education? To whom does this administrator report?
- Is there a particular office location where it is managed?
- How does the leader have a voice in key policy and budget decisions, either directly (e.g. through a position on a council of chairs or deans) or closely (e.g., reporting to a dean of undergraduate studies who sits on such a council)?
- What are the typical responsibilities of such a leader? They might include budget allocation, policies and procedures, program evaluation, faculty recruitment, and relations with students, administrators, departments, and colleges, as well as chairing a cross-college committee (see above).

16. In an institution with a well-supported interdisciplinary general education program, additional budgeting procedures assure that the program continues to receive stable and adequate support, in allocated money rather than grant funds, even if institutional funding is reduced.

- Do resource allocations support the program's needs? Does the program have its own budget line? Does the program have access to funding allocation for classroom equipment and material, supplies, and new technologies?
- To what extent is library support sufficient to support interdisciplinary curriculum? For example, what funding is available for collections? Does the institution provide access to collections elsewhere? Does the library offer instructional services to contribute positively to helping integrate the goals of interdisciplinary programs with general education goals?
- How are faculty lines allocated for the interdisciplinary general education program? Does allocation of faculty lines take into account not only numbers of majors or student credit hour generation within a particular unit but also the needs of interdisciplinary general education?
- How do procedures for budgeting and policies regarding faculty load acknowledge that team teaching, with the consultation involved, can require more work than individually taught courses?
- What funds are set aside for faculty development?
- If team-taught or interdisciplinary courses add revenue, are equitable means in place to share it?

17. An effective interdisciplinary general education program maintains visibility and focus. Ongoing efforts are in place to keep faculty and students aware of the program and informed about its goals. In addition to institutional catalog descriptions, program brochures and recruitment materials, other possible options are addressed by the following:

- Does a program newsletter reach members of the campus community?
- How often does a column, regular or occasional, about interdisciplinary general education appear in the campus newspaper?
- Do program course syllabi contain explicit mention of how the goals of a particular course relate to the goals of the program?
- How are student advisors kept informed of the interdisciplinary education program, its goals, and its structure?

Category F: Assessment

An effective assessment program is an integral part of an interdisciplinary general education program, providing an intentional culture of evidence in which the general education program evolves. The evidence is grounded in a program mission that explicitly acknowledges its interdisciplinary foundations.

18. An effective interdisciplinary general education program has an assessment plan that is integrated into the daily life of the program. Data should be collected systematically, both formatively and summatively.

- Do the courses incorporate regular assessments as well as final tests of content and inquiry skills as appropriate?
- How is students' integrative or interdisciplinary learning assessed across their general education program?
- Does the institution carry out ongoing program assessment that includes student, faculty and administrative input?

19. The assessment program considers how the learning goals of the general education program include appropriate interdisciplinary goals. It also considers how the specific learning outcomes include synthesis and integration.

- How do the course assessments of student learning specifically address coherence, synthesis and integration?

20. An effective model for assessment includes consideration of the relationships among student characteristics, the interdisciplinary curriculum, pedagogy, and intended as well as serendipitous learning outcomes, with feedback to improving curriculum.

- In what ways are student characteristics, such as gender, race or age, standardized test scores, family background, and personal aspirations integrated with assessment of curriculum and pedagogical outcomes?
- How are the outcomes of assessment used to revise curriculum and pedagogy, as useful?

21. Effective assessment of programs and of student learning outcomes uses direct and indirect data from multiple sources. These sources may include surveys, standardized tests, focus groups, and actual student performances on authentic tasks. A focus on actual performance, and the development of techniques such as rubrics to measure that performance, is integral to the development of an effective general education assessment plan.

- What mechanisms are in place to consider indirect and direct assessment data in relation to each other?
- How are both qualitative and quantitative measures, as well as national and locally-designed approaches, used?
- Are there defined responsibilities for gathering the data and making it available to program evaluators?

22. In an effective assessment program the data is made available to both stakeholders and impartial observers. Stakeholders meet frequently to examine data and consider strategic questions that will enhance teaching and learning. Impartial observers evaluate the assessment plan at least once a year.

- In what ways does the institution provide financial and human resource support for feasible methods of assessment and analysis of the data so that stakeholders and others find the results worth the effort?

23. Although an effective assessment plan undergoes continuing review, three- to five-year evaluations are conducted by impartial observers such as institutional program review committees or outside evaluators.

- How is the assessment plan for interdisciplinary general education included in institution-wide program reviews?
- Is the assessment of the interdisciplinary general education program incorporated into regional and specialized accreditation processes?

References

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