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Chapter 9: An Approach to Program Assessment: Locating Indicators of a Coherent Program

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There are two main purposes of this chapter. First, a framework and rationale for an approach to the assessment and improvement of a physical education teacher education (PETE) program will be presented. Second, that framework will be applied to an analysis of the Georgia State University (GSU) program. An approach that would fit into the Metzler and Tjerdema (1998) model for program assessment in the "research phase" (p. 474) will be described. In particular, an approach to examining program coherence will be provided. First, however, it is important to understand the value of examining coherence as a distinctly different approach from searching for effectiveness in program evaluation.

The Value of Examining Program Coherence

This chapter, and the value of examining program coherence, is informed by three different frameworks. First, Lawson's (1983) initial theorizing on attributes of teacher education programs most likely to have a desirable socialization impact on recruits points the way to variables warranting attention. Building on the work of Lortie (1975), Lawson suggested that "Programs in which a shared, technical culture and professional ideology have been agreed upon and made explicit will have a greater impact on recruits than programs in which this has not occurred" (p. 10). Reviewing literature from occupational socialization, Lawson (1986) extended this work to identify several implications for the design of effective teacher education programs. Included in these implications were the suggestions for uniform professional orientations of teacher educators and an explicit educational design in the program in which appropriate knowledge and skills are integrated and thoughtfully sequenced.

Lawson's (1983, 1986) pioneering work in physical education was extended by the work of Rovegno (1992, 1993) and Graber (1993). Each of these authors studied aspects of a notable physical education teacher education (PETE) program and contributed to the understanding of high impact PETE programs, reinforcing the merits of Lawson's theories. What is missing from this work is a way to confirm program attributes that may generalize beyond the idiosyncrasies of one program. Hence, other perspectives on evaluation are needed.

A second theoretical orientation informing this chapter comes from the work of Argyris and Schon (1974) and their work on professional effectiveness. Two major contributions come from this work. First, Argyris and Schon highlight two different types of theories that guide professional practice. One concept they identify as
espoused theories, or ways professionals "describe and justify behavior" (p. viii). For example, most teachers would describe gender stereotyping as a potentially negative part of learning experiences. If asked, most teachers would support equal opportunities for boys and girls to get equal playing time, skill-related feedback, or be team captains. Put differently, these professionals would espouse the theory of gender equity.

The other concept presented by Argyris and Schon involves theories-in-use, characterized as "operational theories of action" (p. viii). This type of theory must be deduced, based on the actual behaviors demonstrated by an individual. For example, while gender equity may be described as a personal commitment (an espoused theory), gender bias may be deduced as the theory-in-use if boys and girls get unequal amounts of playing time (boys frequently get more playing time), skill-related feedback (boys often get more specific feedback), or chances to be team captains (girls rarely get this chance in mixed gender classes). Hence, one possible combination of theories for a professional might be the espoused theory of gender equity (i.e., when asked, the answer given is that boys and girls should get equal opportunities) and the theory-in-use of gender bias (i.e., boys and girls do not receive equal opportunities in a given teacher's class).

In separating these two theories, Argyris and Schon (1974) suggest that professionals are neither always consistent across theories (i.e., talk about and enact gender equitable opportunities), nor are they necessarily aware of inconsistencies (i.e., treating students in ways that are different from belief statements). Furthermore, the key to successful and responsible professional practice rests with the congruent reconciliation of these two theories. That is, successful and responsible professionals ensure that their professional behavior is consistent with their stated belief system—those who talk about the importance of equity attend to equity when they teach.

The second contribution by Argyris and Schon (1974) to the present work is their attention to the value of looking beyond rhetoric to formal documents and actual behavior. The authors take this reflective process even further by separating problem solving and problem setting. In the context of the present topic of program evaluation, problem solving involves two aspects: purposes and behaviors. The first aspect begins with identifying and examining what teacher educators describe as the purpose of their program. It warrants mention that no qualitative decisions on the part of evaluators are involved with this part of the process.

The second aspect of problem solving in program evaluation includes studying behaviors and curricular content to ensure that these match program purposes. Problem setting, on the other hand, requires a revisiting of program purposes to determine whether or not these purposes and practices are most appropriate for what should be happening. This phase of program evaluation is a requirement of professionals who are obligated to confirm that their services continue to meet client needs. Both of the frameworks described above point to the value of developing a coherent program that is consistently delivered across faculty members. What is missing is a sense of where to look for indicators of these kinds of consistency and coherence.

The third framework comes from the work of Howey and Zimpher (1989) and their examination of preservice programs. Howey and Zimpher described their work as an effort to move the field beyond findings described by Koehler (1985). After reviewing 220 studies on preservice teacher education, Koehler concluded
that the work was “piecemeal and particularistic” (p. 23), offering little in the way of guidance for others hoping to design effective programs. As an alternative model, Howey and Zimpher cited the work of Purkey and Smith (1983) on effective schools as more helpful. In a synthesis of research studies of more and less effective schools, it was possible to describe a number of distinguishing features. It was this vision of effectiveness that guided Howey and Zimpher to construct a series of six case studies of different but distinctive teacher preparation programs, culminating in a list of common program attributes.

Howey and Zimpher (1989) shy away from calling their list of program attributes indicators of effectiveness. Instead, the attributes are described as indicators of coherence. In combination with the two prior frameworks, these indicators appear to support a promising path for examining teacher preparation programs.

Program Coherence Assessment: A Caveat

The merit of what follows lies in the insight potentially available for identifying and evaluating indicators of program consistency. Argyris and Schon (1974) describe these characteristics as important for effective professionals. Lawson (1983, 1986) has described similar needs for programs that will have the potential to exert a strong socializing influence over new recruits.

As readers consider the extent to which their own programs do or could demonstrate coherence, there is potential to improve their own programs. It is important to recognize this process as only one part of responsible professional reflection—problem solving. Problem solving is an integral part of determining program effectiveness and warrants attention. This self-assessment process will confirm the extent to which a program is being delivered as conceived by the faculty. This process will not provide insight into the appropriateness of the match between program delivery and client needs. Questions of appropriateness are addressed through the process of problem setting.

The process of problem setting involves professionals evaluating the extent to which their conceptions of appropriate services are correctly conceived and yield desired outcomes. This process is ignored in the approach to program evaluation described through the following indicators. Problem setting appears in the Metzler and Tjeerdema (1998) model in the “decision-making and improvement stage” (p. 474). The limitation of the following indicators is mentioned because decisions about problem setting must be informed by the results of other assessment tools. Hence, when used in conjunction with other approaches to assessment, the following indicators can provide important insight into how a preservice teacher education program in physical education is being delivered.

A guide to assessing program coherence is presented in more detail elsewhere (Mitchell, 2000). The following list of 14 indicators of program coherence was identified by Howey and Zimpher (1989).

1. Programs of teacher preparation are driven by clear conceptions of schooling/teaching.
2. Faculty appear to coalesce around experimental programs, planned variations, and programs that have distinctive qualities and specific symbolic titles.
3. A sense of reasonableness and clarity are associated with the major goals of the program.
4. The program is rigorous and academically challenging, and students have to work hard to achieve.
5. Themes run throughout the curriculum, like threads, in which key concepts, like buttons, are tied together throughout a variety of courses, practica, and school experiences.
6. There is an appropriate balance and relationship between general knowledge that can be brought to bear pedagogically, pedagogical knowledge, and experience designed to promote pedagogical development.
7. Student cohort groups exist.
8. At some point in the program, cohorts encounter a milestone or benchmark or shared ordeal.
9. Organizational and structural features of the programs enable an interdisciplinary or integrative approach to curriculum.
10. Adequate life space is found within the curriculum.
11. There are adequate curriculum materials, instructional resources, information and communication technologies, and a well-conceived laboratory component in the program.
12. There are numerous curriculum articulations between the activities that occur on campus and those activities that occur in schools.
13. There is some direct linkage with research and development in teacher education, as well as into the content that informs teacher education.


Based on an analysis of the 14 indicators, a summary picture of program coherence can be developed. One approach to developing a summary involves the creation of a scoring system. For example, a subjective assessment of a program as having a high degree of coherence could be awarded 3 points, medium coherence would then be worth 2 points, and low coherence would be worth 1 point.

The subjectivity of the scoring system is mediated by the experiential background of the evaluator. The qualifications and biases of the evaluator will undoubtedly influence the quality of the final scores. The overall program score serves no useful purpose with regard to understanding program coherence. At best, the score can serve faculty as they compare their program coherence scores across time to determine whether they are becoming more or less coherent as they institute changes. More valuable than the summary score are the insights gained during the collection of data. Collecting information on each indicator provides some focus to the type of information that might be valuable when working toward the development of a coherent program.

Searching for Program Coherence at GSU

The GSU program leads to certification in Health and Physical Education that enables individuals to teach in the P–12 schools of Georgia. The search for coherence presented in this chapter is limited to the physical education portion of the program. The main indicators of program coherence are taken from Howey and Zimpher (1989).
Data Sources

Data for the assessment of the coherence of the GSU program come from several sources. Based on recommendations from Mitchell (2000), data sources included the following:

1. Collected documents: course syllabi for all courses within the department required of teaching majors, course catalog descriptions of all courses required of teaching majors, department-produced handbooks and other publications describing program requirements, and student lesson plans with faculty feedback regarding student performance.
2. Formal interviews, following an interview guide designed around the indicators of coherence. Interviews were conducted and recorded with the three main physical education pedagogy faculty (winter, 1997 and fall, 1999), three other faculty members in the department who teach courses required of preservice teachers but are not part of the physical education methods sequence (winter, 1997), administrators: department chair and the Dean of the College of Education (winter, 1997), two cooperating teachers (including site visits in winter, 1997), department staff (main office receptionist), and a total of 10 students (winter, 1997 and fall, 1999) from different years in the program (including recent graduates).
3. Videotapes provided by program faculty of 8 student peer teaching experiences, from the beginning and end of one methods course in the pedagogy block of classes.

Data Analysis

A key attribute of the notion of coherence as it has been conceptualized for this project involves a search for the degree of consistency with which messages are delivered across the program. Hence, a process of analytic induction was followed to facilitate the triangulation of assertions by the faculty of what they believed they were doing with the delivery of courses (and related experiences) as represented by formal documents, perceptions of administrators, staff, and in the behaviors and attitudes of students and cooperating teachers. Finally, member checks with faculty were a part of the process of reporting results of this approach to program evaluation. This reporting process involved informal discussions and the presentation of a formal written evaluation to confirm or refute observations of consistencies and inconsistencies identified across the data sources.

Selected results of the search for program coherence will be presented under each of the indicators. Following a description of the results regarding the specific indicator, an evaluative comment on the extent to which this indicator represents program coherence will be made. The evaluative comment is based on the subjective 3-point scoring system described above. In the description of this scoring approach, it was mentioned that the experience and bias of the evaluator would influence the scores. Hence, it is appropriate to provide some brief background on the evaluator.

I have a doctorate from Ohio State University (OSU), where I studied teaching and teacher education in physical education and across disciplines. I presently work at the University of South Carolina (USC). Including the OSU experience (and my master's degree teaching assistantship experiences), I am working in my
fourth PETE program at USC, allowing me to bring more than 16 years of PETE experience to this project. All four programs shared an orientation to developmentally appropriate movement at the elementary level, with more traditional games and sports at the middle and high school levels and an increasing emphasis on finding ways to incorporate a commitment to an active lifestyle in adulthood. I have provided formal evaluations for four suburban P–12 physical education programs, and I have participated in an ongoing program audit of our own PETE program at USC for the past 2 years. These are some of the main influences of my perspective on the evaluations that will follow.

**Indicator 1:** Programs of teacher preparation are driven by clear conceptions of schooling/teaching (Howey & Zimpher, 1989, p. 246).

Views of the purposes of schools and the roles of teachers were not uniformly held by the faculty and students. While faculty members and students were able to articulate views of these purposes and roles, all drew on personal recollections that appeared independent of any obvious program message. "Educating the whole person, and prepare for the future" (TR), was a common phrase used by students, but none were able to identify a specific source. The expression "Educator as critical and divergent thinker" appears prominently on the cover of the student teaching handbook and in one syllabus. This expression was not used by any participant in any interview.

Conceptions of physical education at different levels (e.g., elementary, middle, high school) were consistent across faculty members and students from all levels in the program. All referred to the development of basic movement forms and social skills in the elementary schools. Introduction of more formal sports and a fitness orientation were common expectations at the middle and high school levels. Specific courses were readily identifiable by faculty and students for communicating expectations for physical education at the different levels. Course textbooks and instructional expectations in the courses named were current and consistent with the purposes described. Faculty and students used similar language and examples to describe and differentiate the different levels of physical education. This language and these examples serve as evidence of a shared technical culture regarding the teaching of physical education in the department. One consistent concern expressed by students was that the program did not provide enough experience with students or the curriculum at the high school level, especially in comparison with the experiences available at the elementary and middle school levels.

The degree of coherence on this indicator is high with respect to the physical education content. With regard to the context of schools and the role of teachers more broadly, the degree of coherence is medium. While few could point to specific places in the program where students learned about teachers and schools, all described schools as places where students prepare for life through a process facilitated by teachers.

**Indicator 2:** Faculty appear to coalesce around experimental programs, planned variations, and programs that have distinctive qualities and specific symbolic titles (Howey & Zimpher, 1989, p. 246).

Faculty are readily able to identify themselves as a group with shared interests and responsibilities. Students and other faculty in the department, including the department chair and Dean, were also able to identify this group. Indeed, the chair and the Dean identified an explicit agenda to create a group with specific
expertise and an identity. The Dean described his wish to have every program
have an orientation he characterized as "research based or data based, effective
practice." He continued to say that he thought the program was moving in that
direction.

All faculty were able to identify courses that had specific missions within
the teacher preparation program. While specific faculty members were also identi-
fied with specific courses, there was a clear sense that all had contributed to the
conceptualization of how the courses should be taught and how each course fit into
the overall program. All faculty also suggested that it would be possible for most
to teach most of the courses such that students would get similar experiences regard-
less of the instructor.

Two of the PETE faculty described program revisions in response to cooper-
ating teacher feedback, and both cooperating teachers identified that students from
the program had improved over the past few years. Another PETE faculty member
described plans to revise two of the required courses in order to better separate and
emphasize key concepts in the program. Decisions regarding revisions to courses
and the program overall clearly rest with the faculty in the department. While there
is an area "leader" who is ultimately responsible to the Department chair for how
the program is delivered, there is a clear sense of shared ownership of these deci-
sions. All three PETE faculty members described this process of decision making,
and the process was witnessed during the site visit. All three faculty have office
space in close proximity to each other in the same building that facilitates formal
and informal meetings to address issues as they arise.

The degree of coherence on this indicator is high. All indications from for-
mal and informal interactions with these faculty suggest that communication lines
are open. Each faculty member was aware of and respected the contributions of
each other faculty member. All spoke of a willingness to voice opinions and re-
lated experiences of having been listened to in the past. Hence, the potential is
high for all to continue to contribute to ensuring courses are delivered as desired.

**Indicator 3**: A sense of reasonableness and clarity are associated with the major
goals of the program (Howey & Zimpher, 1989, p. 247).

The NASPE standards for beginning teachers (NASPE, 1995) were men-
tioned by two of the three PETE faculty members as supplying the major organiz-
ating themes for the design of this program. Hence, these standards were used as the
framework for identifying the extent to which the major goals of the program were
reasonable and clear. The goals were accepted as reasonable on face because of the
endorsement of an appropriate national professional association. The extent to which
evidence could be found in the department for an awareness of these goals was
sought. There are nine standards addressed in the NASPE document, and none was
addressed by name in any of the course documentation. A document approved by
the department regarding program outcomes addresses seven specific outcomes
that have similarities to the NASPE standards.

Neither cooperating teacher named either document, the NASPE standards,
or program outcomes by name when interviewed in winter, 1997. More informa-
tion on cooperating teacher awareness of these standards relative to the program
and their responsibilities are available elsewhere in this monograph (see chapter
8). Beyond these general areas, additional indicators for the existence of each indi-
cator was sought.
Standard 1 involves content knowledge. The dispositions described in the NASPE document were modeled in student interviews. Students spoke enthusiastically about the importance of physical education, physical activity, fitness and the relationship to self-expression, development, and learning.

Standard 2 addresses growth and development. Course syllabi, faculty comments, student comments, and student instructional performances in methods courses reflected attention to individual variations in growth and development. Helping learners become competent and self-confident were themes consistently mentioned.

Standard 3 addresses diverse learners. Minimal evidence was available to support this standard. Seeking information on pupil family, community, cultural values, and experiences was not prominent in any discussion or course document.

Standard 4 addresses management and motivation. Attention to the use of developmentally appropriate practices for motivation, management, and instruction were clearly evident in course syllabi, in faculty discussions, and in the language used by students. Practice teaching assignments that included lesson plans and were videotaped also demonstrated attention to these instructional concerns. Visits to student teaching sites in the winter of 1997 did not show these same commitments. Managerial and instructional behaviors were not entirely consistent with program philosophies.

Standard 5 addresses communication. Students described multiple opportunities to interact with physical education teachers. There was no prominent discussion of interaction with parents/guardians, the community, or other educational professionals. In interviews, all students and faculty were strong communicators. All were able to comprehend questions and articulate in stating opinions and responding with information requested. All students were able to describe experiences in which they were required to integrate technology into instructional presentations. Most commonly, the integration of technology into instruction involved overhead projectors and videotapes, typically in the health portion of their practicum experiences rather than in physical education. All students described experiences with using a variety of research strategies for preparing for classes and for their instructional responsibilities (i.e., Internet searches, library catalog searches, literature searches of related professional journals, and consultations with qualified peers and other professionals).

Standard 6 addresses planning and instruction. Appropriate planning and instruction behaviors are modeled by the faculty in their own teaching and are required throughout practicum experiences. Evidence for these observations comes from a review of course syllabi where clear course goals are stated with appropriate student learning experiences described. In interviews, students consistently described their satisfaction with the ability of methods instructors to help students understand the content. Students also described multiple opportunities to practice their own planning and instructional behaviors with pupils of different age groups. These comments were supported with evidence of student lesson plans and videotaped instructional performances.

One concern with regard to program expectations for planning and instruction was described by several students who had completed their student teaching experiences. These students reported receiving messages from their cooperating teachers that were at odds with program messages. For example, after extensive program emphasis on effective planning and instructional behaviors, one student related how she had been told by her cooperating teacher that “We don’t do lesson
plans here” (TS, 7/99). The student had reconciled this apparent conflict in messages because she went on to describe these teachers as “so burned out that they shouldn’t be doing this anymore” (TS, 7/99). For this student, the disagreement between campus-based teacher educators and school-based teachers was resolved with the decision that the campus-based perspective was more consistent with her own beliefs. This response is testimony to the power of the program in impacting the attitudes of at least one student toward desirable professional behavior.

Standard 7 addresses learner assessment. There is a course that deals with measurement and evaluation that is not taught by the faculty responsible for teacher preparation. One of the faculty members mentioned a desire to integrate more knowledge of authentic assessment. Overall, there was not much evidence that learner assessment is a prominent factor addressed in the program.

Standard 8 addresses reflection. Prominent in the methods blocks of courses and student teaching documents are formal procedures for students to reflect on their instructional performances. There is potential for students to apply reflective skills to a range of issues from immediate instructional performance (Did I use my whistle effectively?) to concerns with implications beyond the immediate lesson (Did my lesson reinforce or challenge gender, ethnic, or other biases?).

Standard 9 addresses collaboration. All students were able to identify faculty members, cooperating teachers, peers, and other professionals to whom they could go for assistance in addressing instructional concerns. Developing partnerships with parents and sensitivity to signs of distress in pupils was not prominent in the comments of students or faculty.

The standards outlined above were used to examine the degree of coherence of this program with regard to the reasonableness and clarity of major program goals. In the context of a program still in early stages of redesign, while there is room for improvement, the degree of coherence on this indicator is high. Two of the three pedagogy faculty members responsible for program delivery described the standards as the focus of their redesign efforts. Standards 1, 2, and 8 are clearly addressed in the program. There is uneven support for standards 4, 5, 6, 7, and 9. No evidence could be identified to support only one standard (standard 3).

Indicator 4: The program is rigorous and academically challenging, and students have to work hard to achieve (Howey & Zimpfer, 1989, p. 247).

Guidelines for entry, retention, and graduation are above institutional minimums. To some extent, these guidelines are imposed by State guidelines for certification. The faculty in the department have clearly attended to designing criteria for entry, retention, and graduation and regularly discuss refinements to their policies and procedures. These policies are published and are readily available to anyone interested in the program.

Students at different stages within the program held different perceptions about how to describe challenging experiences. Without exception, the Biomechanics course was described as the most challenging course in the program. Students were uneven in their appreciation for what the course contributed to their ability to teach. For some students, the course was simply inappropriate. For other students, the course was valuable in facilitating movement analysis.

An analysis of grade distributions across courses reinforces the demanding nature of the Biomechanics course. Similar challenges are apparent in the anatomy, physiology, exercise physiology, and measurement and evaluation courses. Each
of these courses reflects mean grades below a “B.” Activity content courses and methods courses reflect a much higher mean for student grades, suggesting that these courses may not discriminate student performance differences as effectively as do the other nonpedagogy courses.

The degree of coherence on this indicator is medium. Students describe the program as challenging but fair and achievable. The extent to which different degrees of competence are discriminated in the methods courses is questionable. Grades in the methods course appear to be uniformly high. There were skill level differences evident in the videotapes that showed a variety of degrees of expertise in time management, presentation clarity, amount and quality of feedback, and content sequencing. These differences were not discriminated on the course grade sheets. A grading system that does not discriminate and reward excellence condones less than best practice.

Indicator 5: Themes run throughout the curriculum, like threads, in which key concepts, like buttons, are tied together throughout a variety of courses, practica, and school experiences (Howey & Zimpher, 1989, p. 248).

Several themes were apparent throughout the curriculum. One of the most prominent themes for faculty is the use of different instructional models. Introducing different instructional models occurs in some courses, and those models are then reinforced and extended in other courses. The treatment any model receives in a given course varies, as the content is adapted to the focus of the course. For example, “She would introduce the model (e.g., cooperative learning) in her class and [students] would then have a lot of time to practice and plan and implement cooperative learning for young children; when they come to my class they would do the same thing—they would do cooperative learning for tenth graders.” Students and faculty also identified how foundational information in fitness and activity classes was later applied in methods courses and in student teaching. Content mastered in introductory classes was then applied in the development of curricular and instructional materials later in the program.

The degree of coherence on this indicator is high. There is a clear attempt to have students make connections across courses within the program. Connections with concepts in required courses beyond the control of the PETE faculty, however, were less clear. More on this topic is described below.

Indicator 6: There is an appropriate balance and relationship between general knowledge that can be brought to bear pedagogically, pedagogical knowledge, and experience designed to promote pedagogical development (Howey & Zimpher, 1989, p. 248).

The language of this indicator involves a somewhat subjective assessment of what is “appropriate.” Only one faculty member described interactions with other faculty outside of the department regarding curricular connections. Attempts to adapt the content of other nonpedagogy courses within the department had not been well-received. The pedagogy faculty reported an attempt to respond to student feedback to have foundational courses be more relevant to their concerns as future teachers. Students who were interviewed also reinforced concerns with the relevance of foundational courses.

The degree of coherence on this indicator is low. There does not appear to be a strong possibility for changes to the ways in which courses are delivered that are beyond the control of the pedagogy faculty. There also does not appear to be much
of a commitment by the faculty to address the relevance of other courses that are required of their students and are taught outside the department.

**Indicator 7:** Student cohort groups exist (Howey & Zimpher, 1989, p. 249).

Student cohort groups are clearly present in the GSU program. Students are readily able to identify peers with whom they have gone through many courses together. Every student interviewed was able to immediately identify a group of students with whom they had shared specific courses across several years (for those beyond their first year in the program). Faculty describe cohort groups by the sequence and types of experiences they receive. The degree of coherence on this indicator is high. Getting through the program is clearly a shared experience.

**Indicator 8:** At some point in the program, cohorts encounter a milestone or benchmark or shared ordeal (Howey & Zimpher, 1989, p. 250).

The milestone in the program that was consistently mentioned by students was the course in Biomechanics. All believed that they would get through the course with hard work, but it was a notable ordeal. Students also spoke of various challenges in other classes and understood “the block” of classes as a milestone on the path toward student teaching and certification.

The degree of coherence on this indicator is high. It warrants mention, however, that the most challenging aspect of the program was outside the direct focus of teacher preparation. Students consistently talked about the courses within the pedagogy section as things they could do without a lot of trouble.

**Indicator 9:** Organizational and structural features of the programs enable an interdisciplinary or integrative approach to curriculum (Howey & Zimpher, 1989, p. 250).

There are several courses that are required of students seeking certification in physical education and other areas. There was only a passing familiarity with these courses by faculty members. Students could identify these courses, but the courses were described as tangential to their physical education curriculum and instructional concerns.

The degree of coherence on this indicator is low. Consistent with comments made on indicator 6, there does not appear to be much potential for changing the level of coherence with respect to this indicator.

**Indicator 10:** Adequate life space is found within the curriculum (Howey & Zimpher, 1989, p. 251).

There is a preferred sequence to taking the majority of the courses in the program. There are no “shortcuts” or ways to circumvent the requirements, and students are closely monitored for compliance with program expectations. One PETE faculty member was charged with the responsibility of monitoring and advising students as they progressed through the course sequence. There is some flexibility in selecting and timing electives and nonpedagogy requirements within the department. Students consistently reported satisfaction with their ability to have personal lives and excel in the program.

The degree of coherence on this indicator is high. In the eyes of students, there is space for them to meet personal needs and to meet program expectations. This observation is not meant to imply that these students are not busy. Many hold full-time jobs in addition to pursuing full-time study. There appeared to be an appreciation that the program was worth the work.
Indicator 11: There are adequate curriculum materials, instructional resources, information and communication technologies, and a well-conceived laboratory component in the program (Howey & Zimpher, 1989, p. 251).

Students consistently identified the availability of curriculum materials, instructional resources, and information and communication technologies. There was more attention to modeling the use of technology and requirements to demonstrate competence in health than in the physical education portion of the curriculum.

The practicum experiences were identified as a concern by a cooperating teacher who had worked with student teachers several years prior to the initiation of the GSU self-assessment project. Course descriptions, faculty descriptions, and student accounts of the revised program suggest the laboratory component of the program has changed. Students report confidence in their ability to work with learners after having had progressively more demanding practicum experiences with real children (not just peers) in real school settings (without the facilities and equipment available on a college campus).

The degree of coherence on this indicator is high. The greatest strength is with the laboratory experience portion of the indicator. Attention to technology is not well addressed in the physical education portion of the degree program; students did refer to experiences in the health portion of their program as more thorough in forcing them to make technological applications to their instructional performance. All students reported confidence in having access to the faculty as resources for future instructional demands.

Indicator 12: There are numerous curriculum articulations between the activities which occur on campus and those activities which occur in schools (Howey & Zimpher, 1989, p. 252).

Students consistently identified concepts taught and reinforced in theory during methods classes as things that they were able to apply when working with pupils. This connection was true with regard to demands made of the students, according to course syllabi and as evidenced on sample lesson plans. Creating lesson plans, designing instructional materials, and developing the content of lessons for learners were all concepts addressed in theory and in practice.

The same consistency between what was demanded of students in the program and what was modeled by teachers in the schools was not noted. Planning was the most prominent target of student descriptions of discrepancies between what was demanded of them and what they saw in the behaviors of physical educators in the schools.

The degree of coherence on this indicator is medium. While the demands of students are consistent across venues, the models they see are inconsistent. Ensuring that students are placed at sites where program values are reinforced is a critical need. The challenge to all programs is locating teachers who have commitments consistent with the program philosophy, are willing to accept and capable of meeting the responsibilities of having practicum students, and are close enough to the university to be a viable practicum site. Being in a large metropolitan area, GSU has a greater potential than may be true for many programs to identify viable practicum sites. Even with such resources, cultivating collaborative relationships with teachers and schools to serve as practicum sites is a time-consuming challenge.
**Indicator 13:** There is some direct linkage with research and development in teacher education, as well as into the content that informs teacher education (Howey & Zimpher, 1989, p. 253).

There are different ways to interpret this indicator. One interpretation involves the extent to which faculty are engaged in the production of research and developments in teacher education and the content that informs teacher education. Another interpretation involves the extent to which faculty and their students are aware of the existence of these forms of knowledge. At least one other interpretation involves the extent to which the PETE program is designed and delivered in ways that incorporate insights available in the professional literature.

Student awareness of ongoing research projects and researchers was, at best, vague. Several students related accounts of having filled out questionnaires for faculty, but few had much idea why they did so. One student was reading a poster presentation from work presented at a national conference, just prior to our interview. After reading the poster, he realized that he had been a participant in the study. In spite of being reminded that he had been told prior to each data point what was going on, he did not recall the purpose of the study from the prior semester when data were collected.

No students reported any awareness of other research projects that were underway—in spite of having participated in several longitudinal projects that were ongoing and required their responses to attitudinal surveys. No students reported any opportunities to do more than be a participant in studies (i.e., to be a researcher or assistant on a project).

Faculty reported an expectation that students should have knowledge of authors whose work supported emphases within the program. The names of Graham, Hellison, and Siedentop were mentioned by the faculty. Several students mentioned Graham (one of the authors of an elementary methods text) and Laban. None of the other authors were mentioned by name.

The degree of coherence on this indicator is medium. Students are less able than faculty predicted to identify prominent authors who have contributed to the content knowledge or research projects in the field. There is clear evidence of an awareness of the professional knowledge base in the design and content of the course work. There has also been evidence of ongoing scholarly contributions by two of the three PETE faculty. In addition to my awareness of their work in the literature, these faculty members had tried to make their work more visible in their own department by the prominent display of a research poster (from a recent national conference) on the wall of a busy hallway.

**Indicator 14:** A plan for systematic program evaluation exists (Howey & Zimpher, 1989, p. 253).

Within the past 5 years, GSU switched from a quarter system to a semester. This schedule change resulted in substantive self-analysis and program modifications to adjust the number, sequence, and content of courses in the program. In addition to this self-imposed evaluation, two separate analyses have been invited from colleagues at other institutions. This chapter and the chapter by McCullick (chapter 8) are partial representations of those efforts. More evidence exists in the book by Metzler and Tjeerdsma (2000) on program evaluation, this monograph, and several presentations at prominent national research conferences over the past several years.
The degree of coherence on this indicator is high. There has been an obvious and ongoing commitment on the part of the faculty to assess and revise their program.

**A Summary Evaluation**

Based on the analysis of the 14 indicators of program coherence, a summary picture can be developed. Using the simple scoring system previously described, where a high degree of coherence is worth 3 points, medium coherence is worth 2 points, and low coherence is worth 1 point, an overall program score can be calculated. There were 9 indicators scored as high, 3 indicators scored as medium, and 2 indicators scored as low. These scores translate to a total of 35 out of a possible 42 points, or 83.3% (Table 1).

It bears repeating that this summary score serves no useful purpose with regard to understanding program coherence. At best, the score can serve faculty as they compare their program coherence scores across time to determine whether they are becoming more or less coherent as they institute changes. More valuable than the summary score are the insights gained during the collection of data on each of the indicators. Collecting information on each indicator provides some focus to the type of information that might be valuable when working toward the development of a coherent program.

**Table 1  Program Coherence Summary Score**

<table>
<thead>
<tr>
<th>Coherence indicator</th>
<th>Score</th>
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<tbody>
<tr>
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<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>35</td>
</tr>
</tbody>
</table>

*Note.* Each coherence indicator is scored out of a possible 3 points; a higher score reflects more coherence. The percentage is based on a total of 42 possible points.
Suggestions for Enhancing GSU Program Coherence

Based on the assessment of the GSU program, several strategies for enhancing program coherence can be identified. These suggestions are not intended to imply that GSU is not coherent or effective. Rather, all programs can be improved, and what follows are ways in which the GSU program could be more coherent.

The coherence of the GSU program may be enhanced through more discriminating grading in the activity content and methods courses. The skills and knowledge most valued by the faculty will be mastered to different levels by students. Grading practices that differentially reward levels of mastery reinforce program messages regarding what is important. These rewards can be handled in at least two different ways. First, within courses, instructors can ensure that their grading system assigns the appropriate "weight" to allow students to differentiate between more and less important goals of each course. So, it should not be possible to off-set poor performance in cognitively and physically challenging important content with a high volume of good performances on simple and less challenging tasks. Another possibility involves lobbying for "+" and/or "-" grades to further assist faculty in better discriminating degrees of mastery. This alternative may be less realistic given the levels of institutional bureaucracy involved with such decisions.

The coherence of the GSU program may also be enhanced through a better articulation between the pedagogy courses and other required courses. Initial efforts to reconceptualize nonpedagogy courses within the department have been rebuffed. Two alternatives might include (a) offering less dramatic suggestions for projects within the current course structure to be more relevant to pedagogy students and/or (b) making the connections between pedagogy content and other required courses during the delivery of the required courses under the control of the pedagogy faculty. In this way, it may be possible to reduce student perceptions of the irrelevance of other required courses.

Interdisciplinary or integrative approaches to curriculum are challenging. Finding time in an already full curriculum to attend to such concerns is difficult. There are, however, incentives for pursuing this important work. For example, grants are available to support projects designed to improve student performance in science and math. Linking physical education and student aptitude for science and math could be one avenue toward making physical education and other areas more relevant to the lives of students.

Finding and/or cultivating relationships with cooperating teachers and practicum sites is an ongoing challenge for PETE faculty around the world. Continuing to explore the potential for a close match between the program philosophy at GSU and teachers and their programs in the community is one alternative. It is sometimes difficult to move out of a comfort zone of working only with familiar teachers and their programs. Another alternative is to continue with current sites and teachers in the hopes of convincing them to modify their programs and behaviors to be more consistent with the GSU program.

A commitment to professional growth is important. One form of professional growth includes attending to personal reflection, an area well-covered in the current GSU program. Another form of professional growth involves seeking answers to professional questions and sharing results with peers. Involving students with projects that might be shared at state conferences, in state journals or beyond,
are ways to help students become contributing professionals. Engaging students in research projects may also be a way to make the names and related work of influential authors in physical education more relevant to the professional lives of the students now and in the future.

**Conclusion**

Searching for coherence is one important way to examine the delivery of teacher preparation programs. This chapter represents one model for examining program coherence. Ensuring our programs deliver what we say we believe is an obligation of competent professionals. It is worth repeating, however, that a search for coherence is only relevant if we are confident that what we believe is worth doing and is actually meeting the needs of our clients and the greater society we serve. Stating the obvious, we need to remember that people and their needs change. Hence, professionals who wish to deliver quality programs must monitor the extent to which program goals match societal needs. Only then will program coherence be a relevant concern warranting attention.