

The Development of an Undergraduate Competency-Based Coach Education Program

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This article discusses the development of a university undergraduate competency-based coach education program in Canada, namely the Baccalaureate in Sport Intervention (BIS) at Laval University in Quebec City. It addresses program development in three phases: (a) design (b) implementation, and (c) evaluation. It discusses how decisions made regarding the program relate to current research on coaching, coach education, and sport psychology. This article offers an example of how competency-based training for coach education can be implemented within a university setting in a way that addresses some of the primary concerns in the literature on coach education.

This article discusses the design, implementation, and evaluation of a coaching undergraduate program at Laval University in Quebec City, namely the Baccalaureate in Sport Intervention (Baccalauréat en Intervention Sportive, or BIS). The BIS is one of two programs offered by the Physical Education department, the other being a degree in physical education. This three-year program offered its first semester in the fall of 2002 and recently celebrated its first graduating class in the spring of 2005. Decisions made in the development of the BIS were based on three primary sources of information and recommendations. First, the literature on coach education and that of the broader discipline of cognitive psychology provided a theoretical framework as well as ideas for the structure of learning in the BIS. Second, conclusions from the evaluation of the National Coaching Certification Program (NCCP) in Canada provided a rationale for the need for such a program within the Canadian sport context. Finally, best practices in competency-based education in the liberal arts from Alverno College, Milwaukee have provided and continue to be a source of great inspiration for learning strategies and assessment practices that result in student learning and a learner-centered environment.

The objective of this article is to invite discussion from the sport psychology community regarding both the opportunities and the challenges faced by the faculty

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of the BIS in developing this program. The sport psychologist may find that the decisions made in order to address issues regarding competency development in coach education may be transferable to the training of sport psychologists. Also of interest might be the strategies used to have the curriculum reflect both the research on coaching and coach education, as well as on actual coaching practice.

The authors of this article are all faculty members in the physical education department at Laval University and have been involved in the NCCP for many years as master facilitators and curriculum designers. Guylaine Demers is currently a tenured professor at Laval University and was instrumental in the design of the BIS. She also participated in the strategic planning for revising the NCCP after its evaluation, and was involved in writing the new NCCP training modules. A.J. Woodburn, currently a full-time teacher in the BIS and doctoral candidate in educational psychology, is responsible for student internships and two of three elective courses in sport administration. Prior to coming to Laval University, she was a consultant for the Coaching Association of Canada. She is an NCCP master facilitator and was also involved in writing the new NCCP training modules. Claude Savard is a full professor at Laval University and is currently the director of the BIS. He initiated the creation of the BIS and designed the first version of the program. Claude has also been involved in the NCCP reform since it began, playing a key role in the design of the revised program. The three authors are involved on a daily basis in the administration, teaching, student, and program assessment and refinement of the BIS and approach their individual and collective work on coach education from both constructivist and socio-constructivist perspectives.

The rationale behind the creation of the program will first be addressed, and then its development will be discussed according to the following three phases: (a) program design, (b) program implementation, and (c) program evaluation. Though they are discussed as discrete steps, the three phases took place in a continuous cycle as program segments were developed. The information gathering processes used for this account of the development of the BIS included author participation and recall, interviews with faculty, and a review of course outlines, learning activities, assessment methods, student feedback, and unpublished program documents.

Rationale

The BIS offers an innovative approach to coach training in Canada. Through its blended curriculum of course-based learning and structured internships, it addresses both acquisition and participation metaphors on learning described by Sfard (1998) and recently discussed by Trudel and Gilbert (in press) in relation to coach education. According to these authors, coaches learn how to coach both by acquiring and accumulating knowledge about coaching (acquisition metaphor) and by living the coaching role, interacting with others while doing so, and reflecting upon this experience (participation metaphor). This exchange between acquisition and participation has also been discussed by other authors as a key component of effective coach education (Bourassa, Serre, & Ross, 1999; Savard, 1997; Savard & Brunelle, 1998). The BIS curriculum, discussed in greater detail later in this article, is designed to include both ways of coach learning and to deliberately integrate them through reflective practice.

To make the case for the need for the BIS within the Canadian context and argue the decisions made in its design, implementation, and evaluation, one must first situate the origins of this program within a larger framework of coach education in Canada.

Since its inception in 1974, the National coaching Certification Program (NCCP) has been the premier community-based coach training and certification program in Canada, offering sport-specific and multi-sport programming to over 900,000 coaches. The program has been offered by all provincial and territorial governments and by over 60 federally funded National Sport Organizations. In 1995-96, the Coaching Association of Canada led a major evaluation of the NCCP, from which the following conclusions emerged (Savard, 2001): (a) courses at all levels offered few opportunities for coaches to apply concepts and receive feedback; (b) the focus of courses was on information delivery; (c) the original content selection did not reflect a formal job task analysis of coaching; (d) the structure of the program needed to be more flexible to accommodate the specific reality of diverse sport organizations; (e) program outcomes needed to be articulated more clearly; (f) limited professional development opportunities were available at each level (Coaching Association of Canada, 2005).

Though successful in its reach, the conclusions of the NCCP evaluation regarding its effectiveness were not surprising because they were entirely consistent with the critiques of traditional approaches to coach education (Gilbert, 2002; Trudel & Gilbert, *in press*). The NCCP has since been undergoing significant changes: (a) offering a more flexible structure to accommodate differences between sports and coaching environments, (b) including a more rigorous assessment component that would provide clearer evidence of coaching competency for certification purposes, and (c) introducing a new curriculum based on competencies¹ required to coach effectively in specific environments and to help them put knowledge into practice more effectively (Coaching Association of Canada, 2003). By shifting the curriculum from what coaches need to know to what they need to be able to do with what they know, and by contextualizing it based on the needs of the different types of sport participants with whom coaches intervene, the NCCP aims to better train coaches in the competencies required of them in their coaching practice. Though these improvements address some ecological validity concerns by making coach education more applied, Trudel and Gilbert (*in press*) suggest that this type of education remains within the acquisition metaphor, so it does not sufficiently address the need for interaction with others in a real coaching environment as an important part of coach learning. This experiential learning and the reflective process that accompanies it, or the participation metaphor for coach education, has been referred to as the “art of coaching” (Percival, 1971) and has only recently become an area of increasing study in coach education research (Cushion, Armour, & Jones, 2003).

The findings of the NCCP evaluation seem to support the need for a professional coach education program that could reach beyond the many limitations that a community-based program must accommodate, such as cost, time involved in training, as well as assessment requirements for coaches to demonstrate competency. Conn and Razor (1989) suggested that mandatory certification at the community level would invariably deter some from involvement in coaching for reasons of

time and money; it is likely that this conclusion would hold true for the NCCP, as many coaches that participate in the program are community sport volunteers. Also, suggestions made in the coach education literature for improving coach education that have been discussed earlier and that cannot be addressed in a large-scale coach education program such as the NCCP can be reexamined in light of what is possible within the BIS framework.

Another criticism regarding coach education is the seeming lack of impact that coaching research has had on coach education programming (Abraham & Collins, 1998; Lyle, 2002). A strength of the BIS is that the faculty designs, delivers, and evaluates the program, and this faculty is also involved in both the NCCP and the coaching research community. Of course, the link between the researcher and practitioner in this case is so strong that it begs a need for both research design rigor as well as external contribution in the assessment of the BIS.

The Design Phase

Defining Program Competencies

The initial design of the BIS began by determining professional competencies that were deemed essential for coaching effectiveness and would form the basis upon which decisions relating to curriculum content would be made. Though structuring a professional education program upon required abilities in a given profession is not new (Paquay, Altet, Charlier, & Perrenoud, 2001), doing so in coach education in Canada is new.

Professional competencies identified by the NCCP were adopted by the BIS, because they stemmed from a thorough job-task completed by the Coaching Association of Canada in response to issues previously identified from the evaluation of the program. The job-task analysis was performed by surveying coaches from grass-roots to high performance across Canada and who were identified by their peers to be expert coaches (Coaching Association of Canada, 1996). These coaches were asked to identify coaching functions they fulfilled and tasks they completed as part of their coaching responsibilities. The survey generated a list of five functions and 158 tasks, which were used to formulate the professional competencies for the BIS (see Table 1).

Laberge and Lalime (2005) showed that, in Quebec, only 50% of high performance coaches make their full living from coaching. The other 50% must couple one or more other jobs with their coaching responsibilities to comprise full-time employment. Of this 50%, half obtain added employment from outside the sport sector, whereas the other half occupies administrative positions within sport. This picture for full-time coaching employment only gets worse as the context moves from high-performance to entry level sport. It was deemed necessary, therefore, that the BIS also prepare coaches to assume administrative responsibilities and that this be reflected in the professional competencies of the program.

In response to this need, the BIS faculty conducted a job-task analysis in 2001 with 10 sport administrators from Québec City using a focus group process. The results of this analysis became the second source of inspiration for the BIS competencies, and are reflected in the detail of the Managing a sport program competency (see Table 1).

Table 1 The BIS Professional Competencies

Professional competency	Description
Making ethical decisions	The ability to respond to coaching situations that have ethical implications in a way that is consistent with the NCCP values and Code of Ethics
Planning a practice	The ability to plan a practice that is safe, structured, purposeful, and appropriate for the maturation and ability of the participants
Analyzing performance	The ability to detect and prescribe measures for improvement in athlete performance
Providing support to athletes in training	The ability to effectively deliver and manage training sessions
Supporting the competitive experience	The ability to perform the coaching tasks required at competitions and to manage participants during competition
Designing a sport program	The ability to design a seasonal or annual sport program that is consistent with NCCP guidelines for athlete long-term development and program design
Managing a sport program	The ability to perform the administrative and managerial tasks required in order to meet the needs of the participants and of the program, including • Managing human resources • Managing financial resources • Managing equipment and infrastructure • Managing marketing and communications • Performing organizational assessment and control duties

Structuring Learning

The primary restriction in training format for the BIS was that training had to be grouped into courses to fit into the university framework. The question for the BIS designers was this: How can a professional competency be developed over time within a university structure that favored learning segmented by subject matter?

One action taken was to name courses to reflect the professional competency that students were expected to develop during the course (e.g., Teaching Motor

Skills Effectively instead of Theory and Principles of Teaching). Although seemingly trivial, the course names triggered faculty to plan courses that developed a competency and not one that simply delivered content.

For each course designed, the following questions were addressed: (a) What content is needed to support the development of this competency in this course? (b) What learning strategies are most effective in developing this competency? (c) How much time is needed to develop this competency to the level expected of students at this point in their training? These questions led to the creation of some six-credit courses, twice the length of the three-credit courses that are customary at Laval University. The six-credit courses provided the time necessary to introduce the content required to develop a specific competency, as well as the use of learning strategies such as cooperative learning that are time-intensive.

These questions also led faculty to group courses into “learning pathways,” illustrated in Figure 1. By linking courses offered by several professors, faculty can work together to ensure that the competencies are being developed progressively over time. For example, assessments within each course are progressive (which is also true in the traditional model), however assessments are also linked and progressive over a series of courses within a given pathway. This provides a way to measure the development of a given competency across semesters, throughout the program, a design element referred to internally as the *approche programme*, or the program approach.

The learning pathways also led faculty to rethink their teaching roles and responsibilities, because it became immediately clear that consistency, collaboration, and support of one another would be instrumental to the success of a given pathway and of the program itself. For example, within the *Teaching effectively* pathway illustrated in Figure 1, there is a different lead professor for each course; however, professors share in the supervision and assessment responsibilities among courses. In other words, it is a team of faculty that supports the students in each pathway, versus a more traditional university model, wherein a professor would be responsible for a single course from beginning to end. No comparative models could be found for this structure; however, arguments have been made in the general education literature in support of collaborative practice among faculty and changing faculty roles in response to learner outcome-centered programming (McDaniel, Felder, Gordon, Hrutka, & Quinn, 2000). The changing faculty role required for the BIS to succeed is addressed later in the article.

The Implementation Phase

Selecting Learning Strategies

Because a competency-based approach was chosen for curriculum design, learning strategies enabling the integration of knowledge into practice were required. Learning strategies that lead to competency development are action-based (doing, not just hearing about), are as closely related to the real task as possible (complex and integrative) and take place in as authentic a setting as possible (Lasnier, 2000). A repertoire of learning strategies was chosen for the BIS, based on the literature in teacher education (Bourassa et al., 1999; Lafortune & Deaudelin, 2001; Paquay

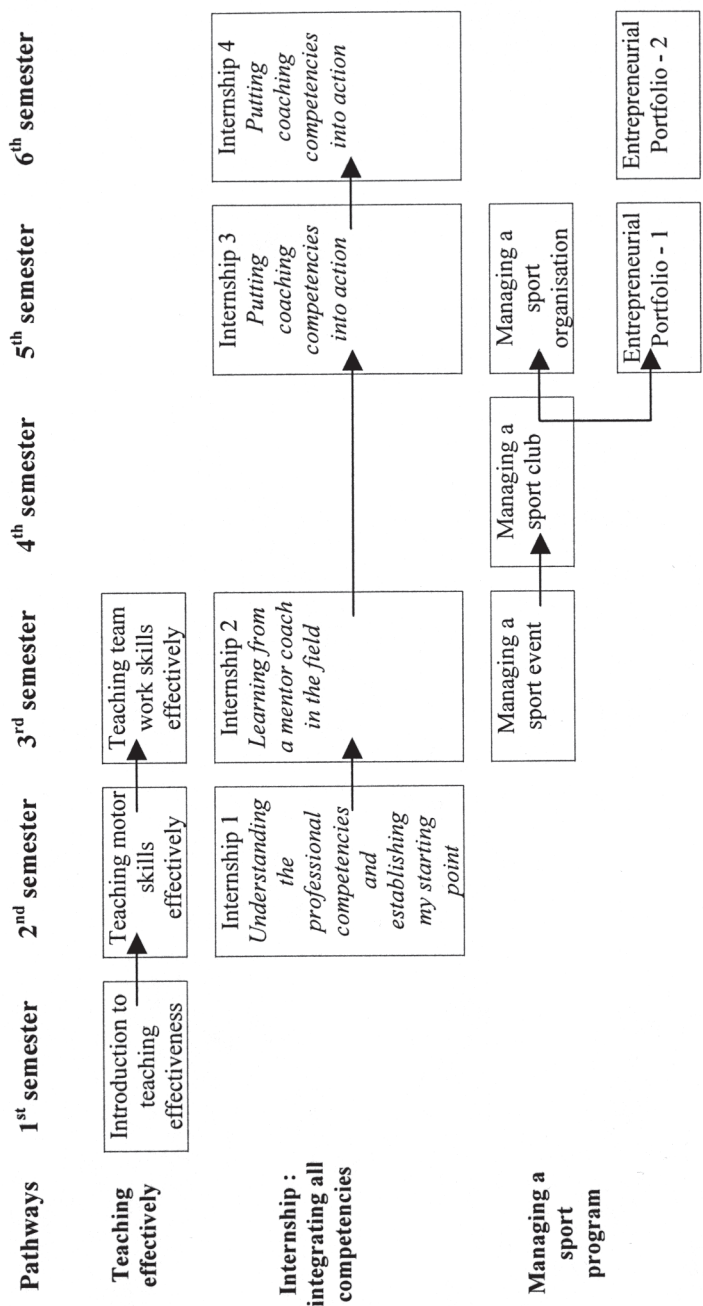


Figure 1 — Three sample learning pathways for two professional competencies in the BIS.

et al., 2001; Perrenoud, 2001; Poirier-Proulx, 1999). The following examples describe the primary learning strategy used for two of the three learning pathways illustrated in Figure 1.

In the *Teaching effectively* pathway, cooperative learning is used extensively. In the first course, students work together to plan their teaching and are then required to teach what they planned to elementary school children for one-hour sessions (the children are bussed to the university). They are also required to assess themselves and each other, receiving feedback from their peers after they have completed their teaching session. In the second course, students team-teach the elementary students and receive feedback from a graduate student while they are teaching via a two-way headset. This process stimulates students to become reflective practitioners or to think about how they are teaching while they are teaching. Reflexive practice has been shown to be an important contributor to learning from experience (Gilbert & Trudel, 2001; Schön, 1983) and is used in combination with other learning strategies in many pathways.

In the third course, students work in pairs; while one is teaching, the other is providing feedback to his or her partner via a two-way head set. The professor is assessing the feedback provided from one student to another, as the nature and quality of feedback offered by a student to his or her peer can provide direct evidence of a student's understanding of effective teaching. In this course, students are working with groups of 12 children, compared to their first course, wherein they teach groups of six children. Considerable planning and the effective use of A/V equipment that permits live interaction and video recordings for self-assessment are proposed to be important to the effectiveness of this strategy in promoting learning.

One of the primary goals of experiential learning in the BIS is to develop students as reflective practitioners, a concept of professional development described by Schön (1983). Although experiential learning takes place within many courses, as per the example previously discussed, it is at the heart of the *Internship* pathway. The Internship pathway was designed to help students immediately put into practice in a real coaching environment what they were learning in other pathways. Students choose their own internships in their preferred sport based on series of criteria. They are required to dedicate a minimum of 135 hours per internship. Initially, there was no course work required in addition to the practical work. However, it soon became evident that the integration of concepts learned in other pathways was not taking place automatically by virtue of working in a real environment, even when the student was coaching under the guidance of a mentor coach. For example, though students were working on new practice planning concepts in a morning class, the transfer was not always made to coaching practice shortly thereafter. This lack of automatic transfer has been discussed by other researchers studying experiential learning (Alverno College Experiential Learning Committee, 2002; Bourassa et al., 1999; Posner, 1996) and is consistent with the use of reflexive practice as part of the experiential metaphor for learning (Schön, 1983). This led to the conclusion that specific assignments had to be added to each internship that would require students to link concepts learned in other pathways to their coaching practice as well as to critically reflect on their coaching in order to identify what and how they were doing and what their strengths and key areas for development were. The assignments also had to provide guidance in how to organize their thinking and plan what they would try to learn next. One important addition to be made in the

next academic year will be a more systematic use of self-assessment tools to help students develop accurate self-perception. The Internship pathway is currently being refined so that in early courses, the reflection process is much more guided and specific, whereas in later courses the process is less structured in order to encourage students to develop their own frameworks for their reflections.

Using experiential learning as the preferred teaching method in the Internship pathway also required special consideration in designing the students' class schedule. The students' timetable allows for internship work most afternoons, and many students also coach evenings and weekends, depending on their sport and their internship environment. In development are the establishment of a network of mentor coaches and repeating internship environments that allow for closer and more consistent guidance in the development of the students through experiential learning. Already in place is a mentor and student supervisor, a faculty member who is responsible for administering the internships as well as designing learning activities and assessments that guide reflexive practice.

Though not used systematically within a given pathway, another learning strategy used extensively in many courses within the BIS is problem-based learning (PBL). PBL was chosen because it models the problem-solving process that coaches must apply on a regular basis to be effective and is actually one of the original generic coaching competencies identified for the program. In using PBL, the process becomes as significant a training element as the actual problems presented to coaches. The effectiveness of this type of learning strategy results from requiring each coach to measure his or her individual learning by clearly identifying his or her starting point before new knowledge is introduced, by integrating the new knowledge, and then by comparing his or her end-point with the starting point for each problem posed.

Problems are not, however, always pre-assigned to students. In the Internship Pathway, the students work with their mentors at describing and defining problems as they arise in real coaching situations and then set about to solve them together. Allowing for instances wherein coaches must first identify and define problems is an important part of the learning process (Schön, 1983; Trudel & Gilbert, in press).

Faculty Considerations

Because academic freedom is highly valued in a university setting, it is impossible to impose a teaching design upon faculty members. As such, in order to successfully implement a competency-based program within a university setting, the following conditions needed to be and are currently present in the BIS faculty: (a) the desire to collaborate, (b) a thorough understanding of the pedagogical approaches and course content used in the courses of colleagues, (c) willingness to participate in regular and informal meetings, (d) readiness to collaborate on student assessment, and (e) the trust in each other in order to work as a team in monitoring effectiveness.

The Evaluation Phase

Program evaluation is in its infancy, as the first class graduated only in the spring of 2005. The faculty has decided that the two most important questions to ask in order to assess the quality of the program is whether students have acquired

the competencies in Table 1 by the end of the program, and if so, was the acquisition of these abilities a result of the program? In order to answer these questions, one must first have a valid and reliable means of assessing student entry and exit points, as well as a way of linking progress to the curriculum. This is the work that is currently in progress.

The Alverno college research department has chosen a model for program evaluation for their school that BIS has adopted (Loacker & Rogers, 2005). In the Alverno model, rather than have program evaluation sit as an exoskeleton around the program itself (i.e., testing students outside of the assessments that are part of the everyday curriculum), program evaluation will be accomplished via curriculum-embedded assessment. In a curriculum-embedded assessment model, student assessments during the various learning pathways (early, middle, and end points) are the primary sources of data for study on the quality of the program. Alverno also follows its graduates into the work force in order to continually ensure that the competencies that are being developed remain relevant (Loacker & Rogers, 2005).

The first step in putting in place this model was the implementation of a synthesis course for the first time in the spring of 2005. During this course, students must demonstrate what they are able to do through modular assessments that are closely tied to the program competencies. For each module, students must reach a minimum standard of expertise (a passing grade is set at 80% for university marking purposes). Each student has three opportunities per module to meet the standard and can choose when assessment will take place. After the first class of students and the faculty lived the synthesis course for the first time, it became clear that this process can be used to identify a gap in the curriculum and can serve as a powerful program regulator. For example, part of one module was to conduct a professional portfolio presentation, during which, among other requirements, the student was to discuss his or her values and how he or she demonstrates these values in every day coaching practice (Making ethical decisions competency). A total of 60% of students provided what could best be described as a shopping list of values but were unable to show how their values were reflected in their coaching practice. This led faculty to reexamine the learning activities and assessment in the *Personal Development* pathway (a pathway that is not illustrated in Figure 1).

Of the first group of students to complete these assessments, an average of 50% succeeded on the first attempt of each assessment, and a total of 85% had succeeded by the second. Fifteen percent of students waited until the fall of 2005 to reattempt one or more assessments and used the summer months to improve. Though the synthesis course will remain a key feature of the BIS and will play an important role in program regulation, the biggest challenge it poses is that it is extremely demanding of faculty, involving many individual exchanges and assessments with students.

Future Directions

One of the key goals for the upcoming academic year in the BIS is to render more explicit the standards for each professional competency that students are expected to demonstrate in order to graduate. Also, professors are clarifying the level of competency students are to reach at specific moments in the program in order to

ensure their progress toward graduation. Though an initial structure is in place, the reality of this type of work is that it is only in doing that faculty find out what is truly possible, valid, and reliable assessment.

A learning pathway that links the core sciences of human movement has yet to be developed and currently represents a weakness in the program. Courses such as anatomy, physiology, motor learning, and biomechanics are still taught as discrete courses, so students have difficulty integrating the concepts learned in each course into the ability to analyze human movement in a real coaching environment.

Another objective is to integrate self-assessment more systematically and progressively within all learning pathways. Competent professionals are reflective practitioners and lifelong learners (Schön, 1983), so training students in reflexive practice is instrumental to their development. Teaching students to assess themselves accurately and effectively not only results in a sense of personal responsibility for their learning, but also encourages them to profit fully from the learning opportunities offered (Mentkowski, 2000).

The BIS continues to cycle through the processes of design, implementation, and evaluation, so is being improved in perpetuity. The primary goal of the program remains to develop coaches who can meet the needs of the athletes they support and can do so within a framework of ethical practice.

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End Note

1. For the purposes of this article, the definition of a competency will be that of the Quebec Ministry of Education (MEQ): "A set of behaviours based on the effective mobilization and use of a range of resources" (MEQ, 2001).

Manuscript submitted: July 15, 2005

Revision received: February 8, 2006