

PEER REVIEWED ARTICLE

Enhancing Girls' Participation in Physical Education: A Framework for Action

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Introduction

Ensuring the active engagement of female students in physical education (PE) continues to present challenges for teachers. Researchers examining aspects of the PE experience continue to report a notable level of discontent among girls and young women (e.g., Gibbons, 2008; Gibbons & Humbert, 2008; Olafson, 2002). To address this discontent, numerous researchers have begun to identify features of PE courses and/or programs that have demonstrated success in facilitating the positive involvement of female students (e.g., Felton, Saunders, Ward, Dishman, Dowda, & Pate, 2005; Fraser-Thomas & Beau-doin, 2004; Gibbons, 2009; Gibbons & Gaul, 2004; Humbert, 2006; Pfaeffli & Gibbons, 2010; Ward, Saunders, Felton, Williams, Epping, & Pate, 2006). For example, Felton et al. (2005) coined the term "girl-friendly PE" to describe programs that incorporate the following features: (1) students are physically active in class, (2) noncompetitive activities are offered, (3) opportunities for gender separation are offered, (4) there is an emphasis on lifelong physical activity, (5) classes are fun and enjoyable, (6) appropriate instructional methods are used (e.g., small group work), and (7) behavioural skills for PE are taught.

More recently, Gibbons (2009) identified six themes in her analysis of 32 elective high school PE courses that sustained high enrollment of female students. These themes included a focus on life-time physical activities, the involvement of students in course development, the use of authentic assessment, the inclusion of gender as a course design feature, the inclusion of value-added options, and the establishment of a positive and respectful class environment.

It appears likely, given the findings of studies such as Felton et al. (2005) and Gibbons (2009), that no single all-encompassing action will increase the

engagement of female students in PE, rather, a range of interrelated smaller actions that address a complex and always evolving learning environment will be needed. Given the sheer number and intricacies of such actions, teachers may benefit from a practical resource that reflects current theory and helps to identify, organize, and implement a wide range of possibilities. This article provides an overview of such a resource.

Self-Determination Framework

The overall framework for the resource manual is grounded in Deci and Ryan's (1985, 2000) self-determination theory (SDT) of motivation. Briefly, SDT

suggests that the state of motivation an individual displays is influenced by the need for autonomy, competence, and relatedness. Individuals who perceive they are autonomous (i.e., they have a sense of choice), competent (a sense of efficacy), and related (a sense of social attachment) will more likely be intrinsically motivated to engage in a particular behaviour. Someone who is intrinsically motivated engages in an activity for the enjoyment and satisfaction derived from participation. In contrast, extrinsic motivation focuses on the external rewards associated with participation, while amotivation is associated with a complete lack of value and meaning.



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Several researchers have used SDT to examine an array of features within PE. For example, in their examination of the major causes of amotivation in 14-15 year olds in a mandatory PE course, Ntoumanis, Pensgaard, Martin, and Pipe (2004), found that if the needs for autonomy, competence, and relatedness are not met, amotivation is a predictable result. They also found that behaviour associated with amotivation differed between boys and girls. Amotivated boys displayed disruptive behaviour, while amotivation in girls was manifested in passive behaviour. Ntoumanis (2005) also found that students who perceived that the PE teacher supported their needs (autonomy, competence, relatedness) were significantly more likely to enroll in optional PE courses than those students who did not feel their needs were supported. Prusak, Treasure, Darst, and Pangrazi (2004) used SDT to manipulate instructional practice in PE. In an effort to

examine the effect of the presence or absence of autonomy on motivation to participate in PE, they offered different choices in a walking unit for middle school girls. They found girls in the group with more choices were significantly more intrinsically motivated than girls in the group with no choice. The preceding results support the suggestion that teachers' instructional choices associated with SDT can directly affect student involvement in PE classes, both in terms of immediate enjoyment, and in the longer term by influencing students' choice to enroll in subsequent PE courses.

Many of the features of SDT are present in the work of Felton et al. and Gibbons (2009); however, no study to date has explored the creation of a resource consistent with the SDT framework for physical education teachers to use. The following phrase guided the overall purpose of the resource manual: "If a PE

course emphasizes development of girls' autonomy, competence, and relatedness, then they will be more likely to be intrinsically motivated to engage in meaningful participation in PE" (Gibbons, Humbert & Temple, 2010, p. 3). Developing the manual involved the identification and compilation of a comprehensive list of actions that focus on the three self-determination components. It was also important to ensure that the manual was organized and presented in a manner that made it convenient and easy for teachers to use. For a full description of the development of the resource manual, please see Gibbons, Humbert, and Temple (2010).

Organization of the Resource Manual

The information in the resource manual is organized into two parts for each of the three SDT components: autonomy, competence, and relatedness. Part one for

This article presents excerpts from a resource manual developed by teachers, designed to translate the major components of self-determination theory (Deci & Ryan, 1985, 2000) into pedagogy that can be used to enhance the active involvement of their female students in physical education. Self-determination theory posits that an individual's motivation to engage in a particular behaviour is influenced by his or her need for competence, autonomy, and relatedness. The authors describe how a wide range of pedagogical actions associated with these components may be used to address the motivational needs of their female students in high school physical education.

Cet article présente des extraits d'un document d'information produit par des enseignants dans l'optique de concrétiser les grandes composantes de la théorie de l'autodétermination en pédagogie (Deci et Ryan, 1985, 2000). Une telle théorie peut s'avérer pratique en vue d'inciter les jeunes filles à participer activement aux cours d'éducation physique en milieu scolaire. D'après la théorie de l'autodétermination, la motivation d'une personne à adopter un comportement particulier est tributaire de sa quête de compétence, d'autonomie et de rapprochement. Les auteurs expliquent que ces composantes sous-tendent une panoplie de mesures pédagogiques jugées utiles pour répondre aux besoins motivationnels des étudiantes du secondaire dans des contextes d'éducation physique.

Table 1: Autonomy Action Checklist

Development of Autonomy (Sense of Choice)					
I. Utilize student input	Yes old	Yes new	No	N/A	Describe your actions here
a. Survey students about physical activity preferences					
II. Advocacy actions	Yes old	Yes new	No	N/A	Describe your actions here
a. Promote value of choice to administration					
b. Encourage administrators to timetable several same-grade sections in the same block					
III. Resource utilization (community and school)	Yes old	Yes new	No	N/A	Describe your actions here
a. Use available community & in-school resources					
b. Allocate some of the PE budget to non-traditional equipment					
c. Seek out community donations of facilities, resources etc.					
d. Seek out alternative sources of in-school funding for PE program needs (e.g. parent advisory councils)					
IV. Planning & timetabling actions	Yes old	Yes new	No	N/A	Describe your actions here
a. Balance exposure to higher cost activities with economic limitations					
b. Promote courses early & often					
c. Examine scope & sequence across grades					
d. Provide students with choice between co-ed or single sex courses and/or classes					
V. Assessment actions	Yes old	Yes new	No	N/A	Describe your actions here
a. Provide some choice around what will be assessed					
b. Provide opportunity for regular self-assessment					
VI. Incorporate choice into practice/play opportunity	Yes old	Yes new	No	N/A	Describe your actions here
a. Provide competitive/non-competitive options and allow the students to choose between them					
b. Incorporate small choices in parts of the class					
VII. Choice in physical activity attire	Yes old	Yes new	No	N/A	Describe your actions here
a. Provide guidance around "active wear," then provide choice					
VIII. Other actions to develop autonomy	Yes old	Yes new	No	N/A	Describe your actions here
a.					
b.					
c.					

This checklist allows a teacher to document his or her pedagogical actions, provides an overall picture of the PE course, and in so doing may show areas for potential growth.

each component is made up of an "Action Checklist". The Action Checklist organizes actions designed to enhance the component into general categories and more specific subcategories, and is presented in a format that allows teachers to check off actions they have implemented in their PE programs. A series of check boxes are included to help teachers distinguish between new actions, existing (old) actions, actions not implemented, and those actions deemed to be not applicable (see Tables 1, 3, and 5 for sample action checklists). The terms "new" and "old" refer to actions that have either been newly added (new) or actions that have been continued from previous courses (old). Space is also provided for teachers to jot down details of their actions. This checklist allows a teacher to document his or her pedagogical actions, provides an overall picture of the PE course, and in so doing may show areas for potential growth.

Part two in each component is called an "Action Suggestion Guide". The purpose of the Action Suggestion Guide is to provide a wide range of ideas teachers have used to implement actions in the context of their own schools (see Tables 2, 4, and 6 for sample Action Suggestion Guides). The following sections provide excerpts from the Action Checklists and Action Suggestion Guides for autonomy, competence, and relatedness.

Actions for Autonomy

Actions associated with the concept of autonomy focus on ways to help female students in PE feel that they have a sense of choice. As mentioned earlier, teachers who have successfully involved female students in PE have incorporated different elements of "choice" within their courses (e.g. Gibbons, 2009, Pfaeffli & Gibbons, 2010). One of the categories in the Autonomy Action Checklist that helps facilitate a sense of choice highlights the importance of utilizing input from students (see Table 1). Highlighted in a sub-category, "the use of some form of survey as a means to gather input from students" is an action familiar to many teachers. The wide range of ideas included in the Autonomy Action Suggestion Guide in Table 2 provides teachers with

Table 2: Excerpts from Action Suggestion Guide for Autonomy

Actions	Suggestions
I. Utilize student input	
a. Survey students about physical activity preferences	Considerations for organizing student surveys: • Find out what the students are interested in, what they've done before, what they want to do more of/less of • Have students select from a list organized in categories of activities, allow student to add to the list • Have students complete a PE profile (physical activity likes/dislikes/experience). Check to see if there were an activity that majority would like to do that isn't being offered (try to incorporate if appropriate). Ask students what activities they do not want to do. • Use a yearend survey –rate their top 10 from activities throughout the term. • Ensure choices involve a range of types of activities (i.e. not only major games). • Ensure student voices are heard (e.g. survey and ask students to write down top three choices). • Pay attention to peripheral activities, boys may override girls' choices via majority (e.g. don't depend on "majority rule"). • Consider ethnic/cultural background of the students in your class by overtly including examples on selection sheet. • Challenge the perception of gender specific activities • Generate the schedule cooperatively with students. Make your yearly plan after discussions with students. • Provide choice within movement categories "choice within a choice" (e.g. badminton or tennis, choice of dance – hip-hop, jazz, line dance etc.) • Administer a PE course evaluation to gather information from students and use this information to make changes, show students that you use their feedback. • Assess the existing PE curriculum to determine if it is meeting the needs of all students.

specific actions to consider in the design and implementation of the survey. For example, the implementation of a survey is explored in greater detail, including suggestions for the timing of the survey (e.g., administer surveys in the first week of the term, then use the results to plan the course moving forward), along with a discussion of the importance of grounding the survey within relevant PE curriculum learning outcomes.

The remaining categories and sub-categories in the Autonomy Action

Checklist identify other areas besides "activity offerings," where a teacher can act in order to contribute to building autonomy. For example, other sub-categories include building choice within assessment, ideas for utilizing resources in order to be able to offer a wider range of activities, and offering the choice between a co-ed or girls-only learning environment in PE. The manual also includes Action Suggestion Guides, similar to the example in Table 2, for each of these categories.

Table 3: Competence Action Checklist

Development of Competence (Sense of Efficacy)					
I. Balancing depth & breadth of learning	Yes old	Yes new	No	N/A	Describe your actions here
a. Ensure all aspects of the provincial PE curriculum are addressed					
b. Check for scope and sequence across grade levels					
c. Include activities to improve health-related fitness					
d. Utilize skill development principles in curriculum planning					
e. Plan for health-related fitness outcomes using the FITT principle					
II. Opportunity for student leadership	Yes old	Yes new	No	N/A	Describe your actions here
a. Provide opportunities for students to teach others					
III. Assessment actions	Yes old	Yes new	No	N/A	Describe your actions here
a. Plan units around assessment, so students learn what they need for success					
b. Provide opportunities for learning in the cognitive domain					
c. Balance assessment across participation, skill development, theory					
IV. Plan for skill/health-related fitness development	Yes old	Yes new	No	N/A	Describe your actions here
a. Provide a range of opportunities to practice and play at different skill levels					
b. Work toward mastery					
V. Use a range of teaching styles (student and teacher centered)	Yes old	Yes new	No	N/A	Describe your actions here
a. Use teaching styles that foster choice and decision-making					
VI. Complement in-class activities	Yes old	Yes new	No	N/A	Describe your actions here
a. Implement a no-cut policy i.e. come to practice get to play					
b. Provide extra opportunities to practice (e.g. before school, lunchtime, clubs, intramurals)					
VII. Teacher role modeling	Yes old	Yes new	No	N/A	Describe your actions here
a. Use local experts to overcome lack of personal skill in an area					
b. Allow students to see that you are not a skillful performer in every activity					
c. Avail yourself of opportunities on PD days to increase PE knowledge					
d. Be an active role model					
VIII. Other actions to develop competence	Yes old	Yes new	No	N/A	Describe your actions here
a.					
b.					
c.					

Table 4: Excerpts from Action Suggestion Guide for Competence

Actions	Suggestions
I. Balancing depth and breadth of learning	
a. Ensure all aspects of the provincial PE curriculum are addressed	• Individual fitness, gymnastics, and dance are popular options for many girls.
	• Balance physical activity offerings across activity categories (e.g. don't allow one activity category to dominate the PE program). Reminder – different students excel at different activities).
	• Incorporate physical activities that have “lifelong potential.”
	• Begin exposure to lifelong physical activities prior to senior PE.
	• Incorporate more alternative activities vs. traditional activities.
	• Know the curriculum, it should be the backbone of your program.
b. Check for scope & sequence across grade levels	• Plan PE program over applicable grade ranges in your school (9-10, 6-7-8) (e.g. decide on which activities will appear in each grade, will there be activities unique to each grade?)
	• Develop departmental guidelines for content of units that are sequenced across grade levels (e.g. basketball 8, basketball 9, basketball 10).
	• Set up a binder of lesson plans for each unit/grade; new teachers use the plans/learning outcomes to plan their lessons.
c. Include activities to improve health-related fitness	• Individual fitness options are popular with girls (e.g. boxercise, Pilates, yoga). Offer more choices.
	• Include regular fitness circuits that address a range of fitness components (e.g. strength, flexibility, muscular endurance).
	• Regularly integrate health-related fitness assessment into PE lessons (e.g. tie directly to regular fitness circuits).
	• Include a variety of ways to regularly highlight personal fitness throughout the term (e.g. Fit Fridays, Partner Runs, Mother-Daughter Walks, wear pedometers in different activities).
	• Include a wide range of health-related fitness activities (fun circuits, contests (most sit-ups, foul shots), team building activities with a fitness focus).

Actions for Competence

Actions focused on the concept of competence (sense of efficacy) are reminders of its powerful effect on behavior in class. Girls who do not feel competent in their skills in PE will look for ways to avoid participation (Gibbons, 2008; Ridgers, Fazey, & Fairclough, 2007). Such avoidance will in turn limit a student's opportunity to practice and improve her skills (and the potential to feel more competent), ultimately catching the student in a negative cycle. The categories and sub-categories of actions

included in the Competence Action Checklist focus on the importance of minimizing the chance of having students get caught in this negative cycle. Accordingly, categories including a range of pedagogical actions that address the depth and breadth of learning are predominant. Examples of these categories include planning for scope and sequence across grade levels, attention to sound skill development principles, and attention to the progressive development of health-related fitness. Also included are categories of action directly focused

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on the importance of teacher role modeling, providing opportunities for student leadership, and planning for assessment that is balanced across the learning domains in PE. All the categories and sub-categories of actions included in the Competence Action Checklist are presented in Table 3.

The Action Suggestion Guide for Competence includes a compilation of specific suggestions teachers use to implement the general action stated in the sub-category. Some of these action suggestions are presented in Table 4.

In general, the excerpts in Table 4 demonstrate the types of specific suggestions teachers make in order to maximize and, in some cases, personalize the impact of the general actions in the sub-categories. For example, the suggested action to develop “a binder of lesson plans for each unit/grade for new teachers” will undoubtedly strengthen the scope and sequence across grade levels by providing both clarity and consistency. Similarly, the suggested action to “include a variety of ways to regularly highlight personal fitness throughout the term (e.g. Fit Fridays, Partner Runs, Mother-Daughter walks, pedometer walks)” provides the teacher with ideas to maximize the effectiveness of this sub-category.

Actions for Relatedness

Actions linked to the concept of relatedness provide a critical reminder of the value female students place on social

Table 5: Relatedness Action Checklist

Development of Relatedness (Sense of Social Attachment)					
I. Community building inside the classroom	Yes old	Yes new	No	N/A	Describe your actions here
a. Include cooperative games & teambuilding activities					
b. Learning about self and others					
c. Creating a respectful and safe environment					
d. Include learning outcomes that focus on fair play					
e. Encourage and assess aspects of social responsibility					
f. Provide opportunities for students to learn from each other					
g. Ensure students are aware of content/expectations so they can anticipate and plan ahead					
h. Have a high level of student engagement and motivation					
i. Reduce comparisons and potential for embarrassment					
II. Taking PE to the community (outside the classroom)	Yes old	Yes new	No	N/A	Describe your actions here
a. Involve students in volunteer activities (in-school and out-of-school)					
b. Social action projects					
c. Explore physical activity opportunities in the community					
III. Other actions to develop relatedness	Yes old	Yes new	No	N/A	Describe your actions here
a.					
b.					
c.					

Given the complexity of the learning environment in PE, it is unlikely that a single all-encompassing action will make programs more engaging for many female students.

aspects of the learning environment in PE. The impact of feeling socially included should not be underestimated. Actions included in the Relatedness Action Checklist focus on ways to help female students develop a sense of social attachment within their PE class. Consequently, the majority of categories and subcategories of actions contribute from different perspectives to the building of a positive classroom community. For example, the inclusion of cooperative games and teambuilding activities, providing opportunities for students to learn from

each other, and the inclusion of learning outcomes that focus on fair play, all contribute in different ways to community building in the classroom. All the categories and sub-categories of actions are included in the Relatedness Action Checklist presented in Table 5.

As with the Action Suggestion Guides for both autonomy and competence, the Relatedness Action Suggestion Guide includes a collection of specific suggestions for teachers to consider when they implement the general action stated in

the respective sub-category. A sample of these action suggestions is shown in Table 6.

The excerpts in Table 6 show the sheer quantity of suggestions for each of the sub-categories, indicating the significance that teachers associate with these actions. Whether it is a suggestion to learn the names of students as quickly as possible or using a variety of grouping methods to help students feel comfortable and safe, all suggestions make an explicit contribution to making it easier for students to feel safe and connected to the class.

Summary

This article presents an overview of the content and structure of a resource manual designed to help teachers enhance PE experiences for their female students. Given the complexity of the learning environment in PE, it is unlikely

Table 6: Excerpts from Action Suggestion Guide for Relatedness

Actions	Suggestions
I. Community building inside the classroom	
a. Include cooperative games and teambuilding activities	• Intersperse teambuilding and/or cooperative games throughout the course.
	• Include game creation activities (e.g. invent-a-game).
	• Explicitly emphasize the major teambuilding concepts when using teambuilding activities (e.g. trust, cooperation, communication, risk).
	• Encourage students to cheer each other on as they complete fitness challenges.
	• Create an atmosphere where congratulations and support is given regularly (high fives).
b. Learning about self and others	• Use journals for student self-reflection on what they are learning about themselves as a physical activity participant (e.g. what I am proud of, where I want to improve).
	• Have self-assessment checklists for students each day; keep in a binder, (e.g. effort scale, helpfulness scale).
	• Help students develop connections with classmates: know names of classmates, icebreakers etc. "Try finding someone you haven't worked with today."
	• Learn the names of your students as quickly as possible, welcome them into the class "culture," emphasize that you want them in class.
	• Have a contest/rule – students and teacher must know everyone's name after first week of class.
	• Use a rotating tournament ladder throughout the semester, by the end of the semester everyone has worked with everyone else.
	• Explicitly remind students to be sensitive to different skill levels and activity preferences.
	• Create active classroom posters and a photo story which students share information about themselves.
	• Teach girls to value what their bodies can do rather than how they look.
	• Emphasize that where we start and where we finish are the most important things.

that a single all-encompassing action will make programs more engaging for many female students. It is much more likely that teachers will implement an array of small actions that are appropriate in their unique school context. This resource manual anchors and organizes these

actions in a theoretical framework. Grounded in the self-determination theory of motivation, the components of autonomy, competence, and relatedness are used to organize a wide range of actions for teachers to consider in the design and delivery of their PE courses.

A copy of the *Making Physical Education Meaningful for Girls and Young Women: Implementation of a Self-Determination Framework* resource manual is available for download at: <http://education2.uvic.ca/faculty/sgibbons/pages/research.html>

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