



THE RELATIONSHIP OF SKILL USE AND MOTIVATION OF SPORT COACHES IN HAMEDAN, IRAN

Peyman Norouzi*,

Mohammad Sadegh Vaghar Kordabadi

M.A. Student, Gilan University, Iran

Abstract:

Over the past decade, the rapid pace of skill into education has changed the way teaching and learning is conducted in higher education. However, this promising approach seems to be neglected about Hamedan sport coaches. This study investigated sport coaches' motivation and practices of skill. To this end, eighty-eight sport coaches from three universities in Iran participated in this study. The data collection instrument measured coaches' motivations, teaching methods, and skill use. The findings of the study indicated that Hamedan sport coaches held positive motivation toward the use of skill, yet a limited use of skill. The participants further reported several barriers in integrating skill in Hamedan physical education classes. It was also found that skill use positively and significantly correlated to coaches' motivation. Based on the current study physical educators may be willing to apply skill teaching if given opportunities to prepare, practice and utilize appropriate resources.

Keywords: motivation, physical education, teaching methods

1. Introduction

An area in which skill has not become customary, yet has great potential, is in physical education. Although discipline-specific skill has been developed, generally, skill inclusion has not become commonplace in physical education due to limitations like lack of education, personal comfort levels, availability of equipment, and space and time (Martin, 2003). Physical educators can integrate skill through a variety of approaches. Preparing, generating, administering, and reporting information such as fitness scores, class participation, or motor skill rubric grades for both students and coaches are completed

more efficiently (Posner, 2004). In addition to normal everyday skill use, physical education programs can be structured based on the enhancement of content-specific skill. Physical educators can include the use of word processing and desktop publishing for items like newsletters, information packets or student portfolios. Coaches can utilize skill through fitness assessment databases, physical education department Web pages, content-based software programs, multi-media systems and visual presentations. Digital videos, exergaming equipment and other fitness-related devices may be incorporated into daily assignments and unit planning (Mohnsen, 2006). The nature of teaching and the organization of instructional materials can be further developed by the use of Internet for increased communication, resources, and lesson ideas (Friedman, 2006).

Skill is changing continually and raising new questions on how to use it in an effective, interactive, engaging and integrated way in the classroom. Although education has been part of the new skill era for some years, the choice of using skill appropriately to develop an effective teaching and learning environment may be a difficult task for many educators. The relative contribution of skill to teaching environments is still open to discussion, particularly in relation to higher education. Skill can consist of computer programs, Internet programs, or other assistive, digital and communicative tools. Classroom coaches have integrated these forms of skill over time using a variety of methods through different styles and practices (Becker, 2001; Friedman, 2006; Judson, 2006; Wozney, Venkatesh & Abrami, 2006).

The influences on skill use involve both the structures of motivation and practice. Beliefs and motivations often account for a large part of the coaches' willingness or reluctance to use skill in their classrooms. In fact, beliefs and motivations toward skill play an important role in the adoption of instructional skill and likelihood of influencing students' learning in the classroom (Zalpour, 2014). The formation of motivations can provide an understanding of coaches' decisions and perceptions (Lee & Solmon, 2005). Motivation may serve to explain decisions educators apply to teaching and how they prepare to teach with skill (Lumpe & Chambers, 2001). Coaches' Motivations and experience are factors associated with computer use (Christensen, 2002; Dashtestani, R., 2012; Vannatta & Fordham, 2004). Both a positive motivation about skill and skill skills in combination are accepted precursors for effective use of skill (Christenson, 2002; Migliorino & Maiden, 2004; Zalpour, 2014). Additional factors that influence motivation are self-efficacy, social norms, and external demands among others.

A number of factors may contribute to determine the educators' decision of using the skill when planning and teaching. This study focused on four distinct variables pertaining to physical educators; perceptions of relevance and importance of skill; teaching methods; skill proficiency and context. These variables were chosen to be analyzed because of their emergence in reviewed literature. A theoretical framework

which designated that these four variables contributed to coaches' motivation about and usage of skill was the basis from which the study was derived. Coaches' individual differences and their environments are considerations along with coaches' motivations and skill use characteristics. Identification of these variables provides valuable information for those working on curricular modifications, coach education and professional expectations. As skill becomes increasingly available in universities, the necessity to examine usage, issues of quality and motivation are of greater importance (Dawson & Ferdig, 2006). Multiple factors contribute to university coaches' use of skill and the reasons they integrate it into their professional practice. For example, the way in which coaches' perceive relevance or importance of skill in curricula has been shown to predict computer use (Kanaya, Light & Culp, 2005). Likewise, the value of skill demonstrated by other faculty members' influences coaches skill usage (Albion & Ertmer, 2002).

Along with motivation, quality and quantity of skill education are strong predictors of skill use (Vannatta & Fordham, 2004). Coaches' technical proficiency and frequency of professional application are significantly associated with computer use. (Becker, 1999). Additional factors that may influence skill use include teaching methods with which the coach is comfortable and the educational context. Contextual factors can shed light on how coaches interpret their role, respond, and make sense of their work based on their conditions (Lumpe & Chambers, 2001). Coaches may be constrained by factors such as access to equipment, education, personal comfort levels, availability of equipment, and time. Barriers within a coaches' context may hinder efforts and meaningful use even when the value of skill integration is widely accepted by faculty (Willis, 1993).

Although distinct motivation and skill use variables have been identified for university coaches, variables have not been studied for sport coaches (Naghavi, M., Honari, H., Karegar, G. H., 2012). It is important to investigate such information because there is no data based information to understand what is necessary for program modification, equipment selection, or effectiveness of skill use. If we better understand motivation of sport coaches and what influences skill use, this can provide useful information for practitioners, administrators, and coach preparation programs. Research can be helpful in structuring professional development in physical education through the identification of university coaches' concerns and their degree of skill use for both personal preparation and curricular applications. This improvement can translate into better teaching, and in due course impact student achievement.

2. Methodology

The development of the instrument included several phases which established construct validity. The questionnaire items were developed from consideration of the elements in

literature review and prior studies of skill adoption in Iran and elsewhere. The survey was constructed and followed by expert review of content. A pilot study was conducted to address clarity and reliability of scores with university sport coaches as participants. Experienced university professors in physical education, coach education, and educational skill programs reviewed the survey design and content subsequent to the pilot for further validation of its scores.

In order to examine the university physical educators' motivations and skill practices a 36-item online questionnaire was developed for this study from a literature review and using previously published instruments (Christensen & Knezek, 2001; Judson, 2006; Swain, 2006; Wozney et al., 2006). Items were initially clustered into four major factors including (a) physical educators' perceptions of relevance/ importance of Skill; (b) physical educators' teaching methods/beliefs; (c) physical educators' skill proficiency and use; and (d) contextual factors. A 5-point Likert-type scale, ranging from strongly agree to strongly disagree was used for the motivation section of the instrument. Other survey items included demographical questions, skill usage, and awareness of skill equipment.

The pilot study investigated the reliability of the scores from the proposed instrument. After pilot study, the survey was modified for appropriateness of content, design, and format.

Following the pilot study, procedures and questionnaire items were evaluated and revised. Data collection procedures and survey components were reviewed to prepare necessary protocols. The questionnaire used for the actual study was prepared with minor modifications to improve clarity of the instrument for participants and the quality of data collection for the researcher. The participants in this study were 88 sport coaches from three universities in Iran: Shahid Chamran University of Ahwaz, University of Isfahan, and University of Shiraz. In this sample, 50 (56 %) females and 38 (43. %) males participated ranging from 22 to 68 years of age ($x = 42.2$ years, $SD = 10.6$). Teaching experience ranged from 1 to 50 years ($x = 15.8$ years, $SD = 10.4$). Participants were either contacted via email or were recruited through public communication tools on the Internet. School administrators also were contacted to help facilitate a connection to physical educators.

All data were exported into statistical software program for analysis. Reliability and validity of the survey instrument scores were evaluated by comparing reliability scores with fit indices during the analysis. The alpha coefficient for the entire survey was calculated to be .907. The entire use section had an alpha coefficient of .940. The alpha coefficients were .961 and .791, respectively, for use of specific skill and general skill use. The alpha coefficient for the entire Motivation section was calculated to be .900. Cronbach's alpha coefficient for inter-item reliability was reviewed at several points during data analysis. Based on the previous analysis, the placement of some items shifted

and some dropped to improve inter-item reliability scores and conceptual fit. After working with items and factors to develop the most appropriate fit, the final model consisted of 22 total items separated into four factors.

Final reliability scores for each factor were: Physical Educators' Perceptions of Importance/Relevance of Skill (= .800); Physical Educators' Skill Proficiency (= .700); Contextual Factors (= .670); and Physical Educators' Teaching Methods (= .680). These figures indicate good internal consistency.

Content validity was initially assessed prior to the dissemination of the pilot instrument by experts in the field of physical education to ensure that the final factor names and item loadings were consistent with their responses. Content was assessed twice during the actual study, again by experts in this area. Since items were modified during the process of determining internal reliability, it was important that content validity was retained. The final content assessment resulted in a high percentage of agreement ($\alpha = 94\%$) by 8 experts. The analyses conducted for descriptive statistics involved reporting the total number of responses and percentages for accessibility, education, and use sections. Total number of responses, percentages, means and standard deviations were reported for the motivation sections. Mean scores for motivation and use factors were used to conduct a two-tailed Pearson correlation analysis. The use section, where individuals selected the frequency of use for skill related tasks, was used for correlation statistics.

University coaches on average have been provided an office computer and Internet access for the past seven years. Some 91.9% of educators in this study have Internet access at their home, 90% have Internet access in their physical education office, and 94.7% have Internet access in a university computer site. Barriers were reported in the survey as they contributed to university coaches' considerations about skill use for physical education. The coaches in this study reported finance (81.7%) as the most profound barrier, followed by class size (48.7%). A list of barriers can be found in Table 1. Interestingly, if barriers were not an issue for educators when using skill for teaching physical education, 80 individuals (90%) agreed they would use skill.

Table 1: Contextual Factors Pertaining to University Coaches' Skill Use

Applicable Barriers	N	%	Most Challenging Barrier	N	%
Finance	72	81%	Finance	35	40%
Class size	43	48%	Class size	16	18%
Lack of education	35	39%	Lack of education	11	13%
Other	22	25%	Other	10	11%
Organization support	21	24%	Organization support	5	6%
Unavailable	15	17%	Unavailable	2	3%
Collegial support	11	12%	Collegial support	2	2%

Note: Coaches checked all applicable barriers and the barrier perceived to be most challenging

2.1 Skill Education

The majority of coaches who participated in this study reported attending approximately 2-3 skill workshops over the past year. Additional forms of education reported were self-taught skill, and some of university coaches did not have any formal education. Of those who had education, the highest responses to the specific type of education received involved basic computer literacy (78.8%) and basic computer applications (77.5%). Less than half of the sample, had education in advanced computer applications (46%) and computer education for curricula integration (36.6%). More than half of these coaches reported receiving either a full day (35.9) or multiple full/half days over a number of years (28%). Only 5.8% of coaches' attended a full semester course in skill.

2.2 Skill Use

In this study, over 90% of university coaches use a computer for personal and professional work, the Internet and email, and the computer while at work on a daily basis. Approximately 78% use a computer daily at home. When calculating the number of educators who give assignments that require skill use, serve on skill committees, or review/select skill products, 70% or more occasionally or never do those things. About 60% of coaches occasionally or never use a computer during instruction in physical education, discuss skill/internet with other coaches, or help others use computers/skill. Around 48% of physical educators in this study occasionally or never use any skill to teach physical education content. Over 75%, however, use a computer either weekly or daily for lesson preparation. More than half of these coaches use the Internet to acquire teaching resources and rely on skill for daily preparation or routine tasks at a weekly minimum.

Coaches were asked to report their perceived level of skill use in one or more areas using a progressive scale from 1 (little science of skill use) to 9 (I apply skill throughout my curriculum). The percentage of coaches who self-assessed their level of application of skill to be at the most extensive level was 30.1%. The majority, however, rank themselves toward the middle of the continuum where they believe that they use skill intermittently and for short-term or specified tasks only. At these levels, coaches are aligned with being fairly comfortable with skill use and are still in a preparation phase for more comprehensive skill integration. Coaches were asked to report their science, accessibility, confidence, and skill use for teaching pertaining to specific skill items. The results indicate that the most known and accessed piece of skill for university coaches in this study is their university website. University coaches indicated that they feel most confident using their email and reported the most used skill equipment to teach with as computer word processing. A list of clustered skill items by type and average percentages for skill use are reported in Table 2.

Table 2: Average Percentages for Skill Use Variables based on Clustering of Skill Items by Type

	Science	Accessibility	Confidence	Use for teaching	Non-Use
Internet Related Tools	45.6%	29.2%	37.2%	20.5%	31%
General Computer Software	48.1%	23.8%	35.1%	31.1%	27.8%
General Computer Hardware	49.1%	28.2%	31.6%	20.6%	34.8%
PE Specific Computer Software	47.3%	18.7%	23.9%	21.1%	41.7%
PE Specific Hardware	50%	18.4%	30.6%	26.5%	32%

Note: Multiple responses were acceptable within the five categories for each item.

University coaches in this study generally had positive motivation about skill use for teaching physical education. The overall means for the factors revealed the common responses to items were favorable, indicating coaches had a positive motivation. Means for each factor were reported using a scale of 1 (strongly agree) to 5 (strongly disagree) for responses and are presented in Table 3. Approximately 95% of coaches who participated in this survey indicated that skill can enhance the quality of teaching physical education. Around 90% of the coaches have increased their use of the Internet and the computer over the past three years and would like to learn about and use skill more. Educators in this study indicated (82%) that they would consider skill when re-designing curriculum and 57% responded to making an effort to apply skill in their current curriculum. Respondents revealed (76%) skill education as a positive experience and 82% attempt to implement new skill once they learn it. Based on these figures, it is not surprising that the majority of coaches (92%) in this study expressed that they use a variety of learning methods for students in physical education class. Of the physical educators who participated, just 34% indicated that skill is frustrating to use without help and 70% feel confident with their current abilities. Coaches expressed (80%) that using skill to teach is enjoyable for them, yet (53%) responded that technical problems and troubleshooting make them feel tense.

Table 3: Means and Standard Deviations for Motivation Items

Factors		N	Mean	SD
Intrinsic motivation Mean= 2.05 SD= 0.37	Q1	87	1.52	0.67
	Q2	87	1.79	0.74
	Q3	86	2.04	0.91
	Q4	87	2.11	0.77
	Q5	86	2.21	0.92
	Q6	86	2.05	0.79
	Q7	85	2.60	1.06
Skill Proficiency Mean= 2.46 SD= 0.54	Q1	87	2.32	1.07
	Q2	86	2.44	1.11
	Q3	86	3.19	1.14
	Q4	87	1.90	0.90

Contextual Factors Mean= 2.69 SD= 0.61	Q1	87	2.02	0.91
	Q2	86	2.24	0.98
	Q3	87	2.82	1.10
	Q4	86	3.79	1.17
	Q5	87	2.61	1.19
	Q6	86	2.67	1.04
Teaching Methods Mean= 2.48 SD= 0.47	Q1	86	2.49	1.03
	Q2	86	2.21	0.88
	Q3	86	2.68	1.13
	Q4	85	3.07	1.13
	Q5	87	1.93	0.89

This factor reported the lowest motivation of the four motivation factors based mean scores. The mean score (2.69, SD=0.61), however, still indicates that coaches generally responded positively to these items. University coaches indicated (69%) that most coaches in their university use skill for teaching. Only 41%, however, know of many physical educators who use skill to teach. Some 80% of the coaches believe they are expected to be science able in uses of skill. As far as having enough equipment to accommodate class size, only 29% of coaches indicated they do. Approximately 60% of coaches can easily access skill resource personnel in their university. Some 62% of physical educators from this study have many barriers that limit their use of skill.

Sport coaches indicated (77%) that using skill in class promotes student motivation or participation. Around 38% of coaches believe that skill takes time away from more important concerns. Just 27% responded that skill does not accommodate personal learning styles. Only 31% of coaches find it difficult for them to use skill to teach physical education, but 45% think that behavior management affects their decision to use skill. When examining the five factors, four for motivation and one for use, significant Pearson product moment correlations were found between all of the factors. Some relationships, however, were stronger than others. The results indicate that a strong relationship exists between university coaches' perceptions of relevance/importance of skill and their skill use ($r = .565, p < .01$). The factors of university coaches' perceptions of relevance/importance of skill and coaches' skill proficiency were also positively correlated ($r = .549, p < .01$). A positive correlation was found between coaches' perceptions of relevance/importance of skill and physical educators' teaching methods ($r = .536, p < .01$). A strong relationship also exists between coaches' skill proficiency and their Skill use ($r = .516, p < .01$).

4. Conclusion and Discussion

The theoretical framework used to guide this study includes university coaches' motivations and practices about skill use for teaching. Coaches' motivations and skill use are divided into interdependent sub-factors of physical educators' perceptions of relevance/importance of skill, physical educators' teaching methods, contextual factors, and physical educators' skill proficiency. The values for internal consistency for motivation were acceptable, however, a larger sample size would ideally provide improved reliability scores (Cronbach, 1951). The survey was subject to revisions throughout the process to establish instrument validity and reliability scores. Decisions on re-specifying were based on statistical outcomes in alignment with theory and content assessment (Anderson & Gerbing, 1988) and multiple reviews from experts in the field. Checking reliability scores at multiple points during re-specification allowed for considerations to items that might have otherwise been overlooked. Taking extra steps to review and appropriately modify survey items or theoretical definitions provided stronger results to further support study findings.

Results indicated that participants tended to be experienced coaches who frequently use the computer and Internet for general purposes. Motivation has been associated with both teaching experience and years of computer experience (Friedman, 2006; Iding, Crosby & Speitel, 2002). Positive motivations toward skill use are linked with the amount of skill experience an individual attains (Migliorino & Maiden, 2004). It is not surprising that the participants in this study demonstrate characteristics that directly relate to motivation outcomes. Positive motivations and experience, however, do not necessarily translate into skill use. Participants perceived a high expectation to use skill, yet expectations may not be realistic if coaches are faced with implementation challenges. Identified challenges like finance, class size, and lack of education certainly inhibit use of skill to teach physical education. Multiple barriers seem to pose integration difficulties for coaches based on the results of this study and other studies have reported similar findings with coaches in other fields (Brzycki & Dudt, 2005; Franklin, 2007; Friedman, 2006).

Concerns about finance translate into the ability to purchase desirable equipment and software appropriate for PE University coaches' and/or students' use. The amount of equipment a university coach requires that is appropriate for maximal student learning parallels their class size. The average number of computers located in computer site does not allow for skill integration using computer programs. Accessibility of other hardware in university was low and reasonably affected the low percentage of use for teaching. Barriers reported in the literature were consistent with those reported by coaches in this study (Friedman, 2006; Park & Ertmer, 2008), which found that coaches find finance concerns as most problematic, and this led to limited equipment and/or resources.

Constraints on use certainly affect the extent to which coaches can use skill for teaching, regardless of their motivation. Due to the cessation of use by barriers, it may be wise for universities to advise both candidates and practitioners in methods to combat costs and devise alternative means to increase their skill accessibility and/or functionality.

Class size does not seem to be a limiting factor in skill use according to this study, yet class size was the second most challenging barrier reported by participants in this study for not using skill. The reported class size is a manageable number of students, so coaches' concern may be due to their perception of the amount of skill equipment needed for their students as opposed to the amount of students in their class. Inequity in resources or financial support between disciplines can be a cause of concern.

Results from this study additionally do not show a strong indication that coaches know of other physical educators who use skill for teaching. Coaches typically interact most with physical educators in the same university or district, so they also are likely to have limited resources. This can influence the use of skill by the participant as use by other physical educators can have a direct effect on an individual's views and behaviors (Albion & Ertmer, 2002). Coaches using skill does not mean that they use it in a positive or productive manner. More exposure, however, could be a beneficial subsidiary. Interestingly, university coaches reported knowing of other coaches outside of physical education who use skill to a much greater degree. Skill use in physical education is being accepted at a generally slow rate, so it is practical to investigate the reasons why this is the case (Martin, 2003).

Skill education was predominantly a positive experience for coaches and although the quality of the education was not examined, coaches were likely to hold a positive motivation about skill when their education experiences were positive. Quality education encourages meaningful use (Christensen, 2002). A number of participants reported self-taught skills, which likely requires a great deal of practice time. University coaches who have high computer skills tend to spend twice as much time working on computers in university as other coaches (Becker, 2000). It is clear from the literature that if the expectation is for university coaches to use skill, it is critical to start skill education during pre-service fieldwork (Mulholland, 2006).

University coaches who participated in this study have an overall positive motivation about skill use. The results of this study clearly demonstrated that if coaches with positive motivation have more access to skill, it is likely they will use it for teaching. If coaches with poor motivations have access to skill, it is unlikely they will use skill for teaching because an educator's decision typically reflects their own feelings over simply having the equipment availability (Hernández-Ramos, 2005; Johnson & Howell, 2005). The amount of skill use can depend on an individual's purpose and the equipment that is available (Drucker, 2006). The most frequently used items are computers, email and the

Internet, so it is likely that most university coaches are using these items for personal use or teaching preparation and not for instruction.

Modeling by other physical educators did not seem to be occurring for coaches in this study, so lack of peer support may have had an effect on low skill usage in university. The attendance at skill workshops for the participants in this study also did not dictate skill use by physical educators for teaching, class assignments or homework. Attending workshops does not guarantee that skill taught to educators will be used for teaching or student assignments (Brzycki & Dudt, 2005). This is in line with previous studies that have shown perceived value and relevancy of skill use for instruction effects coaches' use (Becker, 1999; Park & Ertmer, 2008). University coaches who typically have a more student-centered philosophy tend to use skill, given that resources are provided (Becker, 2001). In this study, these university coaches tended to have a greater inclination to use Skill. Other research has demonstrated that the main requirement for skill integration is for coaches to have a philosophy of adapting their instructional strategies to differing needs of their class and students (Levin & Wadmany, 2006). Fundamentally, university coaches' beliefs have a tendency to influence teaching practices (Pajares, 1992).

There was a positive relationship between the factors of skill use and university coaches' motivation about skill as correlations were found between these factors. Among the factors for motivation and skill use, the strongest correlations were found between skill use and university coaches' intrinsic motivation of skill and between skill proficiency and university coaches' intrinsic motivation of skill. Positive motivations about skill education tend to lead to skill use. Increased use encourages improved technical proficiency (Vannatta & Fordham, 2004). Positive motivation about the value of skill can be related to the amount of education an individual participates in and increased use as both motivation and proficiency have positively correlated with amounts of education or coursework (Johnson & Howell, 2005).

The results from this study, therefore, indicate that involvement in skill education and higher levels of computer skill competency was associated with positive motivation about skill use for coaches who used computers for personal use (Becker, 1999; Christensen & Knezek, 2001; Iding et al., 2002; Wozney et al., 2006). In this study, almost 92% of coaches' reported using a computer for personal use and about 78% use a computer at home, so previous research would support that university coaches in this sample are likely competent in their computer skills.

The priority of skill within educational curricula depends on coaches' decisions about the degree of applicability of skill (Baur & Kenton, 2005). Coaches' application of skill is effective when they are interested in the development of skill integration within curricula (Goddard, 2002). Coaches in this sample clearly have an interest in using skill to teach physical education. In order for curriculum and teaching to be influenced by skill, it

will take more than coaches' interest. Being interested in the topic, however, does not seem to be a challenge to overcome for these individuals. As general skill use increases, most coaches become interested in learning about instructional uses of skill because they recognize its value (Iding et al., 2002). Coaches' perceptions of relevance or importance of skill in curricula has been shown to predict computer use (Kanaya, Light & Culp, 2005). It was not unexpected, therefore, that the overall positive motivation of this sample extended into an inclination to consider skill during curriculum changes.

It is important to understand what university coaches think in order to develop coach education, curriculum plans, and teaching tools. If it is deemed desirable for physical educators to integrate skill in their teaching, analysis of coaches' feelings and contextual factors influencing use is a necessary foundation. Coaches in this study expressed positive motivation even though their reported skill use was not prominent. It is promising that physical educators similar to those who participated in this study are likely willing to learn and apply skill if given the opportunity to prepare themselves and if supplied with appropriate resources. Although these educators are confident about their skills and perceive skill use to be important, increased usage of skill for teaching physical education is not likely unless implementation barriers are removed. These findings are very much supported by other literature as is likely that most university coaches will be challenged with barriers when attempting or continuing to integrate skill. Some barriers that involve equipment or education limitations, generally considered as first-order, may have less complicated solutions than those that are considered second order, for example, personal beliefs or rigid curricula formats. The main concern is that university coaches who are prepared to face these barriers are more likely to overcome them through strategic planning (Ertmer, 1999).

This study provided strong data to understand what university physical educators think about skill use and how they are currently using skill through a reliable and valid instrument designed from the theoretical framework. The findings from this study are similar to past research in other areas of education; however, physical education has discipline specific challenges. These challenges make it necessary to pursue this initial investigation with physical education as a unique context. This study has added to the body of research regarding conditions for skill integration and provided further science of motivation components and current practices pertaining to physical educators' views and teaching practices.

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