

A Comparison of Experienced and Inexperienced Physical Education Teachers' Feedback Patterns Given to Students

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ABSTRACT

The aim of this study was to compare between experienced and inexperienced physical education teachers' feedback patterns. Ten experienced elementary physical education teachers and 10 inexperienced teachers participated in the study. Data was collected by videotaping and audio-taping two lessons taught by each type of teacher. Transcripts of audiotapes were made for all verbal feedback administered by the teachers, and each unit of feedback was coded using a Self-Assessment Feedback Instrument (SAFI). Results indicated that both experienced and inexperienced physical educators tended to provide high frequencies of instructions and disproportionately low rates of praise and corrective to positive feedback regardless of their gender and teaching experience. Whilst the experienced physical educators had significantly higher percentages of using teaching feedback of praise, praise/reinstruct and questioning than the inexperienced group, the female physical educators were found to be more dynamic in using different categories of teaching feedback than their counterparts. To better maintain or upgrade the quality of the local physical education teaching and learning, both inexperienced and experienced physical educators need to be trained or re-trained in different ways to make good use of teacher feedback during their instructions. Professional consultation as well as self-evaluation approach would help to achieve these goals.

Introduction

Feedback is considered a critical teaching function, and researchers in education pedagogy have shown interest in verifying its importance in

physical education. Teachers play many important roles in helping students in their classes to learn (Rink, 2006). One of the more important roles played by a teacher of motor skills involves reacting appropriately to students' performances. The ability of physical educators to provide intonation to learners about the errors and achievements made in a performance is considered an essential competency for the physical education professional (Magill, 1993). This extrinsic information provided by a teacher is called augmented feedback. Contingent upon students' behavior, its purpose is to reinforce students' correct motor responses, eliminate performance errors, or both (Siedentop, Rink, 2006).

Despite the recommendations, the use of feedback patterns in teaching physical education is not extensive, and the feedback patterns of teachers have stereotypical characteristics. Feedback tends to occur at a rate of 30-60 statements in a 30-minute period. Much of it is verbal, in the form of positive, nonspecific evaluations; often this feedback is single-student oriented, with reference to whole movement and its spatial characteristics. Feedback occurs more often during skill practice than during game play and is mostly directed at individuals than at groups (Fink Siedentop, Silverman, 1991, Sau-Ching, 1996; Nicaise and CogŔino, 2006).

Rink (2006) suggested that many teachers not only are lacking in knowledge and pedagogical skills for administering augmented feedback effectively, but are simply unaware of what they are communicating to learners. Teachers with the necessary knowledge, skills, and awareness of communication patterns possess the prerequisites for effective augmented feedback administration. However, this does not mean that teachers can adequately provide the appropriate augmented feedback, because the quality of augmented feedback not only relies heavily on teaching skills but also relies on the decision-making abilities of teachers. Feedback is a cyclical process. It involves observing a student's performance, as well as identifying and judging relevant perception cues in the instructional environment. With this information, a decision can be made about how to respond appropriately to the motor skill performance.

Within the instructional process, teachers constantly assess the learning situation and make decisions that guide the teaching act. Observing environmental cues in the teaching context serves as antecedent to teachers' interactive decision making, ultimately influencing and determining teacher feedback behavior. Rink (2006) refers to this

process as interactive decision making. Conceptualizing augmented feedback as interactive decision making appears promising for understanding the mechanics of feedback.

Given the significance of feedback in the teaching-learning process (Cloes, Premuzak, & Pièron, 1993; Silverman, 1994), the role of feedback provided by physical education teachers has received a considerable amount of attention. Research on differences between experienced and inexperienced physical education teachers' feedback patterns, however, is comparatively limited in Arab countries in general and in Bahrain in particular. A variety of feedback characteristics have been examined, such as the absolute and relative frequency of feedback, the timing of feedback, and the content of feedback (see Nicaise the findings, however, are sometimes inconsistent and do not always support feedback as an essential element of learning (for review, see Lee, Keh, Smoll, Metzler, 2000) found that the majority of teachers' interactive decisions occurred not in response to their judgments about students' behaviors or performance, but rather occurred in response to other factors. These "non-student" events (e.g., teacher or environment factors) include: students' questions or student-created contact with the teacher, transition points in the lesson, anticipation of problems or difficulties by the teacher, concerns with instructional material and equipment, time constraints, teacher's cognitive or affective state, and adult interruptions.

Furthermore, findings from research on experienced/novice teachers suggest that differences in the kinds of schemas (or knowledge structures) developed may lead experienced and novice teachers to focus on different types of environment cues (Fogarty, Wang, Housner & Griffey, 1985). Experienced teachers are more adept at identifying important cues in the teaching environment critical for decision making. Generally, experienced teachers attend mostly to positive student cues and needs of the students, whereas novice teachers mainly focus on students' disruptive behavior and interest. Since experienced teachers are skilled in differentiating cues and attending to salient information in the teaching environment, they are more adept at matching problems with solutions while teaching. Novices, in contrast, perceive many situations as intolerable and thus find it necessary to act on them. The inability of novices to assess the problem situation accurately and plan optimal problem solution matches accounts for frequent inappropriate behaviors and tendencies toward inconsistent performance.

The lack of quality in feedback patterns behavior by teachers, like other teachers' actions (e.g., planning, questioning), may be the result of inadequate teaching skills and cognitive abilities of teachers (Siedentop Rink, 2006). Therefore, a descriptive analysis of the structure of augmented feedback behaviors between experienced and inexperienced teachers would help to better understand the nature of feedback and its role in improving the teaching process.

Problem of the Study

Although the evidence reviewed above clearly indicates that feedback is considered a critical teaching function, most of this information comes from western studies. Less is known, however, about how students in Arab countries in general and in Bahrain in particular perceive their teachers' feedbacks and whether teachers' feedbacks were experience differentiated in physical education. No attempt has been made to analyze feedback patterns and perceptual maps of experienced and inexperienced physical education teachers in the Kingdom of Bahrain, and, as noted, there were differences between experienced and inexperienced physical education teachers' augmented feedback and interactive teaching decisions. Thus, examining the feedback patterns and perceptual maps of experienced and inexperienced physical education teachers is of critical importance and is therefore one of the primary aims of this study.

Purpose of the Study

Assuming feedback behavior is a manifestation of teachers' decisions, the purpose of this study was to (a) provide a descriptive analysis of the feedback patterns of experienced and inexperienced physical educators, (b) compare the feedback patterns between these two groups of teacher, and (c) compare the feedback patterns between male and female physical educators.

Questions of the Study

To fulfill the purpose of this study the following questions were stated:

- 1 - What are the mean percentages of feedback patterns provided by experienced and inexperienced physical educators?
- 2 - Are there significant differences between experienced and inexperienced physical educators in feedback patterns?

- 3 - Are there significant differences between male and female physical educators in feedback patterns?

Significance of the Study

The result of this study can serve a diagnostic purpose to show the relationship between teacher experience and the feedback patterns and interactive teaching decisions. The result of analyzing feedback patterns and interactive teaching decisions may also show where remedial development is necessary in order to improve the effectiveness of physical education teachers in Bahrain. More specifically, the list of feedback patterns provided by this study can be very beneficial to physical educators in providing feedback to students. Above all, a descriptive analysis of feedback patterns and perceptual cues of experienced and inexperienced teachers would help us to better understand the nature of feedback and its role in improving the teaching process.

Delimitations of the Study

The study was delimited by the following:

- 1 - The study was delimited to the ten experienced and 10 inexperienced physical educators.
- 2 - The study was delimited to elementary physical educators in Bahraini public schools.
- 3 - The study was delimited to the use of videotaping and audiotaping three lessons taught by each teacher as the primary data collection method.

Method and Procedures

Participants

Ten experienced (5 females, 5 males) and ten inexperienced (5 females, 5 males) elementary physical education teachers participated in the study. Experience was established in three ways: (a) five or more years of teaching experience, (b) recommendation as a competent teacher by university faculty members or colleagues, and (c) service as a cooperating teacher on numerous occasions. The experienced teachers were recruited from a list of possible participants that met the above criteria in a large public school district and who were willing to participate in the study. The final subject

pool of experienced teachers had an average of 17 years teaching experience. The range in years of experience was between 10 and 20 years. The inexperienced (novice) teachers were physical educators who were within a one year teaching experience in public school

Data Collection

The 20 physical educators were videotaped as they taught two 45-minute lessons to students in 20 intact classes. A total of 40 lessons was observed and videotaped over a period of 3 weeks. Prior to each videotaping, teachers were informed that they could choose the content for each lesson, provided that the instructional objectives increased students' ability to perform motor skills.

All lessons were simultaneously videotaped and audio-taped using a videotape camera placed at one corner of the playground so that it would not interfere with the teaching-learning activities. Teachers wore a micro cassette recorder and an auxiliary microphone. This technique recorded all teachers' verbal interactions with students. Audiotapes were then transcribed for all verbal feedback administered by teachers, and each unit of feedback was coded using the Self-Assessment Feedback Instrument (SAFI) designed by Mancini and Wuest (1989). This transcription and coding of teachers' feedback provided the necessary data for analyzing quantitative and qualitative differences between experienced and inexperienced physical educators.

Instrumentation

The observation instrument used in this study was the Self-Assessment Feedback Instrument (SAFI) designed by Mancini and Wuest (1989). This instrument is a modified version of Chaffers' Adaptation of Flanders' Interaction Analysis System developed by Cheffers (1983). The SAFI is an eleven-category observation system for classifying teacher feedback behavior. It was designed to describe the feedback given during motor skill instruction. The eleven categories in Table (1) are (1) praise, (2) praise/ reinstruct, (3) acceptance, (4) question, (5) instruction during performance, (6) direction, (7) hustle, (8) criticism, (9) constructive criticism, (10) criticism/reinstruct and (11) constructive criticism/reinstruct. Table (1) presents a complete description of the set of SAFI categories and examples.

Table 1: Self-Assessment Feedback Instrument (SAFI)

Symbol	Categories	Definitions & Examples
1	Praise (P)	Teacher praises or encourages student behaviors, actions, ideas, and efforts. Example: "Good job!"
2	Praise Reinstruct (PR)	Teacher praises and encourages efforts, actions and behaviors and then provides information. Example: "Good job! A longer step on your follow-through will help you."
3	Acceptance (A)	Teacher accepts actions, behaviors, and feelings. Example: "I understand your concern about your ability to continue to run faster."
4	Question (Q)	Teacher asks questions requiring answers from participants. Example: "How can you pass the ball accurately?"
5	Instruction during performing (IP)	Information given to students while they are involved in activities such as drills and games or their own performance initiated behavior. Example: "Lower your center of gravity when you dribble the ball to pass your opponents."
6	Direction (D)	Order or direction specifying a response. Example: "Run' play rumble/5."
7	Hustle (H)	Order or direction employed to encourage student's effort or execution of desired responses. Example: "Let's go! Let's go! Get moving!"
8	Criticism (C)	Criticism, anger, or sarcasm directed at participants' efforts, actions, or behaviors. Examples: "That's terrible! How stupid can you be?" "You're wrong."
9	Constructive (Co)	Criticism designed to help participants improve their criticized efforts, actions or behaviors. Example: "Close. Much better than the last time, but still not quite right."
10	Criticism/ Reinstruct (CR)	Criticism, anger, or sarcasm followed by information. Example: "Are you dumb? How many times do I have to tell you? Step forward with your opposite foot when you throw."
11	Constructive criticism/ Reinstruct (CCR)	Constructive criticism followed by information. Example: "That's better than the last dive. Now, if you tighten your tuck, you will be able to spin faster during the dive. Bring your chin down to your chest and tighten up."

Note: Category refers to the characteristics of the feedback which are observable and codable (Mancini & Wuest, 1989).

The observational format was an event-recording system. In using this system, written transcripts of teachers' verbal feedback were obtained. Each feedback unit was then coded as to its praise, praise/reinstruct, acceptance, question, instruction during performance, direction, hustle, criticism, constructive criticism, criticism/reinstruct, and constructive criticism/reinstruct.

Validity of the Instrument

The validity of this observation instrument (SAFI) was established in part by revisions to the original system that do not affect its logical validity. Furthermore, the eleven categories have been established from a review of research findings from both descriptive and experimental studies, and the categories were adequate in reflecting and describing all critical feedback constructs that occurred in the gymnasium.

After revising the SAFI, six experts (three professors from the UOB, and three physical educators) were asked for their comments regarding its suitability, appropriateness, and validity. An 82.8% inter-validity agreement level was reached for the SAFI which indicated that the SAFI validity was adequately acceptable.

Reliability of the Instrument

A pilot study established the reliability of the coding instrument before actual data collection. One other coder and I independently coded transcripts of teachers' feedback from three university physical education classes. During the research period, intra- and inter-observer reliability estimates were determined to establish the accuracy and consistency of the study data. Intra-observer reliability ($r = .86$) was obtained by coding three randomly selected audiotapes twice. The time lag between the first and second coding of each audiotape was 5 days. Inter-observer reliability ($r = .89$) was established by having an independent coder coding 3 randomly selected transcripts of teachers' feedback.

Data Analysis

The Statistical Package for Social Sciences (SPSS) computer program was used for statistical treatment of the data. Two main statistical methods were used for the purpose of analyzing the SAFI data. The first utilized descriptive statistics included frequencies and

percentages for each category and subcategory in the SAFI. The descriptive statistics were computed to determine how many times each one of SAFI feedback incidents had been coded. This was done for each lesson, and the frequencies were summed over all the observed lessons. The second method used an inferential statistic using a t-test analysis to examine the second and third questions of this study. The .05 level of significance was used to determine whether to accept or reject this study question.

Data was initially presented as descriptive data. This would allow the reader to make comparisons with other studies in this area. Each behavior category was recorded as the number of intervals and the percent of the total number of intervals were recorded. The mean percentage for each of the eleven categories of the SAFI was calculated for both experienced and inexperienced physical educators. An independent t-test for each behavior category was used to examine the comparative data of the experienced and inexperienced physical educators. Results from these analyses were used to help explain any plausible quantitative differences that described the characteristic feedback behavior of experienced and inexperienced physical educators.

Results

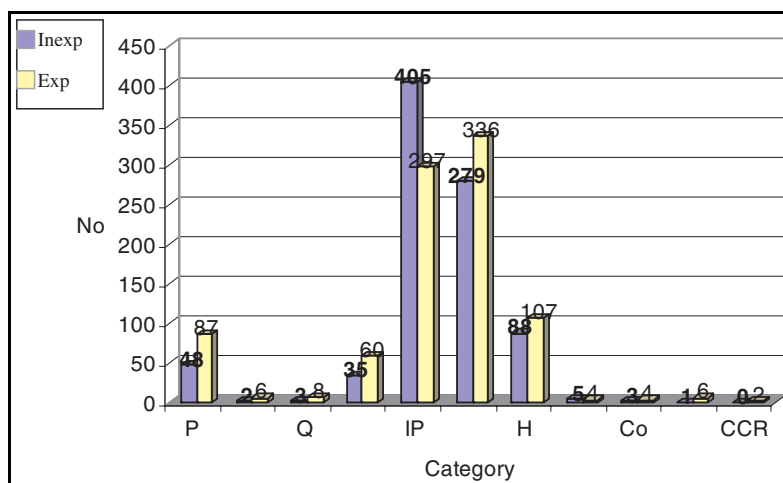
The results will be presented according to the questions of the study.

Question 1: What are the mean percentages of feedback patterns provided by experienced and inexperienced physical educators?

In order to answer this question, the analysis of teachers' feedback patterns was made with all observed categories to allow for better and more accurate comparisons of the quality of feedback between experienced and inexperienced physical educators. For each teacher in both groups (experienced and inexperienced), the data over two observation sessions was collapsed to give an individual teacher's mean of interval. Each teaching behavior category is represented separately. Table 2 and Figure 1 present the number of intervals and the percentage of intervals of the observed categories for all twenty physical educators of this study.

Table 2: Summary of Results for the Total Twenty Experienced and Inexperienced Physical Educators

Categories	Number of Intervals		Percentage of Intervals	
	inexperience	experience	inexperience	experience
Praise	48	87	5.52	9.48
Praise/Reinstruct	2	6	0.23	0.65
Acceptance	3	8	0.34	0.78
Question	35	60	4.02	6.54
Instruction during performing	405	297	46.60	32.40
Direction	279	336	32.15	36.67
Hustle	88	107	10.12	11.67
Criticism	5	4	0.57	0.43
Constructive	3	4	0.34	0.43
Criticism/Reinstruct	1	6	0.11	0.65
Constructive criticism/ Reinstruct	0	2	0.00	0.21
Total	869	917	100	100
Average	43.5	45.8		

**Figure 1: Number of Intervals for the Total Twenty Experienced and Inexperienced Physical Educators**

As Table 2 reveals, for inexperienced physical educators, "behavior of instruction during performance" received the highest individual percentage of recorded intervals with 46.60% whilst "constructive criticism/reinstruct" was the lowest percentage of behavior interval with 0%. For experienced physical educators, the behavior of "giving directions" received the highest individual percentage with 36.67% whilst the lowest percentage of recorded intervals was the category of "constructive criticism/reinstruct" with 0.21%. For the experienced teachers, intervention rate averaged 2.17 per minute, ranging from 1.12 to 3.24. In other words, one feedback was issued every 27.6 seconds. On the other hand, inexperienced teachers emitted an average of one feedback every 35.9 seconds, an intervention rate of 1.67 per minute with a range from 0.84 to 2.56.

Question 2: Are there significant differences between experienced and inexperienced physical educators in feedback patterns?

In order to answer this question a *t-test* analysis was used to compare if there were significant differences in means' percentages of feedback patterns provided by experienced and inexperienced physical educators. Table 3 presents the number and percentage of types of feedback made by experienced and inexperienced teachers as well as standard deviation and *t values*.

Table 3: Mean, Standard Division and *t* values of Types of Feedback Made by Experienced and Inexperienced Teachers

Categories	Inexperience		Experience		<i>t</i>	<i>P</i>
	M	SD	M	SD		
Praise	1.80	1.57	4.25	4.95	2.11	0.001*
Praise/Reinstruct	0.10	0.36	3.36	0.80	1.05	0.030*
Acceptance	0.15	0.49	2.89	0.50	1.17	0.050*
Question	1.75	2.24	3.10	3.59	1.42	0.015*
Instruction	20.25	5.80	15.05	5.87	-2.57	0.756
Direction	13.85	5.10	17.00	6.30	1.73	0.287
Hustle	4.30	3.74	5.35	4.49	0.80	0.910

Cont. Table 3: Mean, Standard Division and t values of Types of Feedback Made by Experienced and Inexperienced Teachers

Categories	Inexperience		Experience		t	P
	M	SD	M	SD		
Criticism	0.25	0.78	0.20	0.69	-0.21	0.652
Constructive	0.00	0.00	0.20	0.52	1.71	0.234
Criticism/ Reinstruct	0.05	0.22	0.30	0.93	1.83	0.324
Constructive criticism/ Reinstruct	0.00	0.00	0.00	0.00	-	-

Out of 11 feedback patterns of the instrument, 4 feedback patterns had significant differences of the t -value related to teaching experience. A statistically significant difference was found in praise ($t=2.11$, $p > .001$), praise and reinstruct ($t=1.05$, $p > .030$), acceptance ($t=1.17$, $p > .050$), and question ($t=1.42$, $p > .015$) feedback patterns. This means that Experienced physical educators provided significant more feedback to students than inexperienced educators in these categories. Table 3 also showed that no statistically significant differences were found in several of feedback patterns. These include: instruction, direction, hustle, criticism, constructive, criticism and reinstruct, and constructive criticism/ reinstruct

Although no differences occurred between the groups on others feedback patterns, minor differences in rankings for the intent category were noted. In reacting to students' direction, experienced teachers administered direction statements more frequently than inexperienced teachers. In their evaluation, they tended to direct their attention toward student predominance errors and undesirable outcomes (i.e., negative type: "No, your hands are too high") (see Table 3).

Question 3: Are there significant differences between male and female physical educators in feedback patterns?

In order to answer this question a t -test analysis was used to compare if there were significant differences in means' percentages of

feedback patterns provided by male and female physical educators. Table 4 presents the mean, standard deviation and t values of types of feedback for male and female physical educators.

Table 4: Mean, Standard Deviation and t values of Types of Feedback for Male and Female Physical Educators

Categories	Male Experience		Female Experience		t	P
	M	SD	M	SD		
Praise	2.35	2.77	3.70	4.62	-1.21	0.105
Praise/Reinstruct	1.54	0.44	3.30	0.73	-1.15	0.050*
Acceptance	0.20	0.52	0.30	0.57	-0.58	0.345
Question	2.25	2.73	2.60	3.37	-0.36	0.689
Instruction	15.00	6.54	20.30	6.20	-2.62	0.048*
Direction	15.30	5.79	15.55	6.16	-0.13	0.632
Hustle	4.60	3.24	5.02	4.76	-0.34	0.674
Criticism	0.25	0.78	0.10	0.68	-0.16	0.578
Constructive	0.10	0.30	0.20	0.44	-0.00	0.852
Criticism/Reinstruct	0.10	0.30	0.10	0.69	-0.23	0.354
Constructive criticism/ Reinstruct	0.00	0.00	0.00	0.00	-	-

Out of 11 feedback patterns of the instrument, 2 feedback patterns had significant differences of the t -value related to gender of teaching experience. A statistically significant difference was found in "praise/ reinstruct" ($t = -1.015$, $p = >.050$), and "instruction" ($t = -2.62$, $p = >.045$) feedback patterns. This means that female physical educators provided significant more feedback to students than male physical educators in these categories. Table 4 also showed that no statistically significant differences were found in several of feedback patterns. These include: praise, acceptance, question, direction, hustle, criticism, constructive, criticism and reinstruct, and constructive criticism/ reinstruct

Discussion

The results of this study showed that experienced physical educators had greater number of intervals on each observed category except criticism and spent more time specifically in using the technique of praise, praise/reinstruct, acceptance and questions than inexperienced physical educators. These results are consistent with the results of a recent study that experienced physical educators seem capable of attending to a wider range of information that can be used to deal with the greater number of details in the instructional setting (Nicaise, & Cogérino, 2006). This profile is consistent with previous research (Pieron 1983; Pieron & Cheffers, 1988; Sau-Ching, 1996; Silverman, 1991; Tan, 1996).

Table 2 examines the number of intervals and the percentage of intervals of the observed categories for all twenty physical educators of this study. Each teaching behavior category is represented separately. For inexperienced physical educators, feedback patterns of "instruction during performance" received the highest individual percentage of recorded intervals with 46.60% whilst constructive criticism/reinstruct was the lowest percentage of behavior interval with 0%. For experienced physical educators, the feedback patterns of "giving directions" received the highest individual percentage with 36.67% whilst the lowest percentage of "recorded intervals" was the category of constructive criticism/reinstruct with 0.21%. The results of this study showed that experienced physical educators had greater number of intervals on each observed category except criticism and spent more time specifically in using the technique of praise, praise/reinstruct, acceptance and questions than inexperienced physical educators. These results are consistent with the results of studies that experienced teachers seem capable of attending to a wider range of information that can be used to deal with the greater number of details in the instructional setting (Sau-Ching, 1996; Silverman, 1991, Tan, 1996). However, feedback patterns such as criticism, constructive criticism, criticism/reinstruct, and constructive criticism/reinstruct behaviors were rarely used by both groups. Most researchers support the notion that students need knowledge of results or statements on the correctness or incorrectness of student responses. However, they state that for the most part, students assume they are correct unless told otherwise. Praise and criticism go beyond simple

knowledge of results. Criticism with negative affect should be avoided, and praise should be used appropriately under different situations (Brophy & Good, 1986). As Siedentop and Tannehill (2000) indicated, corrective feedback is not necessarily negative, and it can be delivered in a positive manner. Changing to a positive feedback focus is another aspect of shifting from a negative to a positive style of teaching. Siedentop and Tannehill (2000) further suggested that a ratio of four positive to every one corrective feedback creates a favorable atmosphere for learning physical education skills.

Overall, the total number of intervals for inexperienced and experienced physical educators were 869 and 917 with an average frequency of 43.45% and 45.80%, respectively. This is in agreement with Siedentop's and Tannehill's suggestion that feedback should be provided by physical educators with a reasonable frequency of 30-60 events during a 30-minute period (Siedentop, & Tannehill, 2000).

The means and standard deviations of the teaching behaviors for inexperienced and experienced physical educators are provided in Table 3. Statistical analyses revealed that experienced physical educators had significantly ($p < .05$) higher percentages of using praise, praise/reinstruct, and question than the inexperienced group. Rink (2006) summarized the research on praise in physical education setting and found that it may be of value to encourage students who are having trouble learning. To be effective, however, praise should be contingent on correct performance, specific to the performance, and sincere. General, non-specific praise is not usually accepted by students as credible. Privately given praise is more effective. Rink (2006) also stated that teachers should praise correctly rather than often. Students also need to be taught to attribute success to their own abilities and efforts rather than to external causes.

Although physical education should be an activity experience rather than an intellectual discussion experience, every teacher should encourage discussion related to the development of skill and playing of games. Students may want to comment on previous experiences or they may want to express ideas about how to play an offense, how to solve a problem, or how to measure the beat of a musical selection. Teachers should not only answer their questions, but also find ways to let

students know that their questioning, commenting, and the expression of ideas are valued. This is one of those "hidden messages" that the learning environment sends out to students.

In this study, a significant difference was found in praise, praise and reinstruct, acceptance, and question feedback patterns. This means that experienced physical educators provided significant more feedback to students than inexperienced educators in these categories. Although no significant differences occurred between the groups on other categories, minor differences among the feedback patterns. These include: instruction, direction, hustle, criticism, constructive, criticism and reinstruct, and constructive criticism/ reinstruct

Experienced physical educators in this study organized environment cues in a meaningful way in their memory and drew upon these schemas when providing feedback. When perceptual patterns of experienced and inexperienced physical educators were compared, a greater number of feedback patterns became apparent. This suggests that experienced teachers are aware of a greater number of relevant stimuli in the teaching environment. This awareness may allow them to possibly integrate more information from the teaching environment for interactive feedback patterns.

The results of this study indicate that experienced teachers seem capable of attending to a wider range of feedback patterns that can be used to deal with the greater number of details in the instructional setting. The capability of experienced teachers to differentiate behaviors that had instructional significance provides them with the potential to understand, evaluate, and interpret the dynamics of the teaching environment with greater depth than inexperienced teachers might achieve. Such a finding would be consistent with classroom research (Carter, Cushing, Sabers, Stein, & Berliner, 1988; Leinhardt & Greeno, 1986; Peterson & Comeaux, 1987).

Classroom studies suggest that experienced teachers have developed information-rich schemas that enable them to selectively attend to information most relevant to the instructional task at hand. Inexperienced teachers either lack the conceptual structures or have less developed structures to make sense of the complexities of teaching events. This observation is consistent with the perceptual map portrayed by inexperienced teachers, which contains sparsely interrelated second-

ary and tertiary cues relating to knowledge about students (e.g., cognitive states, performance, safety) (Sau-Ching, 1996; Silverman, 1991, Tan, 1996).

Table 4 demonstrates the mean percentage of observed categories for gender. There were no significant differences among the teaching behavior intervals between male and female physical educators except in the category of praise/ reinstruct and instruction during performance. The underlying reason for such a finding is unknown. One possible explanation might attribute this to the personality characteristics of different sex. Students reported that female physical educators were found to be more sensitive, more patient, and more caring than male teachers during instruction (Siedentop, & Tannehill, 2000). Overall, the female physical educators played a more active role in using different categories of teaching behaviors than their counterparts in this study.

Conclusions

Based on a strong belief that higher frequencies of meaningful teacher feedback will result in greater student learning, both inexperienced and experienced physical educators need to be trained or re-trained to make good use of different kinds of feedback during their instructions. Likewise, results of this study showed that inexperienced physical educators spent less time on praise, praise/reinstruct and questioning than the experienced group. If such a difference can be attributed to the subjects' teaching experience, it is suggested that the techniques of using praise, praise/reinstruct as well as questioning should be discussed and emphasized during the professional preparation training in order to shorten the time for them to pass from novices to experts.

To better maintain or upgrade the quality of local physical education teaching and learning, information from an informed and trusted consultant may be one way of helping teachers to make changes that would increase the level of student participation with learning tasks during physical education lessons. However, prior to obtaining advice from professional consultants, physical educators could also make good use of existing technology to self-evaluate their teaching behavior. In addition, as video equipment is now becoming more commonplace in the school system, it is highly recommended that physical educators

should self-tape and review their own instructional sessions regularly in order to retain effective teaching behaviors and eliminate ineffective behaviors, thereby making actual behavior more congruent with desired behaviors. Having teachers analyze tapes of their own instruction by using Self-Assessment Feedback Instrument (Mancini & Wuest, 1989) is less threatening than allowing other individuals to view their instructional endeavors. Moreover, personal coding may in and of itself contribute to the awareness of their behaviors (Mancini, Wuest, & van der Mars, 1985). In other words, it is hoped that physical educators will consider adopting and implementing some of these innovative video application and observation instruments to better meet the diverse and varying needs of their students. Furthermore, as stated by Rink (2006), physical education teachers must be able not only to use strategies to help students achieve learning objectives, but they must also learn to evaluate and remediate weakness as in their own teaching.

مقارنة بين معلمي التربية الرياضية المبتدئين وذوي الخبرة في نوع التغذية الراجعة المقدمة للتلاميذ

د. فيصل حميد الملا عبد الله

قسم التربية الرياضية

كلية التربية - جامعة البحرين

الملخص

هدفت الدراسة إلى مقارنة معلمي التربية الرياضية المبتدئين وذوي الخبرة في نوع التغذية الراجعة المقدمة للتلاميذ، اشتملت عينة الدراسة على (٢٠) معلماً ومعلمة (١٠) مبتدئين، و١٠ ذوي خبرة) للتربية الرياضية في المرحلة الابتدائية تمت ملاحظة كل واحد منهم مرتين. وقد استخدم الباحث أداة "التقييم الذاتي للتغذية الراجعة (SAFI)" لوصف التغذية الراجعة المقدمة من قبل المعلم وتحليلها. ومن أبرز النتائج التي توصلت إليها الدراسة أن نسبة التغذية الراجعة المقدمة للتلاميذ في حصص التربية الرياضية سواء من قبل معلمي التربية الرياضية المبتدئين أو ذوي الخبرة قليلة جداً، كما أشارت النتائج إلى أن معلمي التربية الرياضية ذوي الخبرة أكثر حرصاً على تقديم التغذية الراجعة للتلاميذ من أقرانهم معلمين التربية الرياضية المبتدئين، وأظهرت النتائج وجود فروق ذات دلالة إحصائية في نسبة التغذية الراجعة المقدمة للتلاميذ في حصص التربية الرياضية تعزى لجنس المعلم، والفروق لصالح المعلمات. وفي ضوء النتائج أوصت الدراسة بعدة توصيات

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