

Physical Education Teachers and Their Attitudes Toward Change: Implementation of the New Horizon Educational Reform

Sima Zach and Varda Inglis
Zinman College, Wingate Institute

The New Horizon (“Ofek Hadash” in Hebrew) educational reform agreement was signed between the Israeli government and the Teachers’ Union in 2008. The purposes of the educational reform document were (a) to improve students’ achievements, (b) to provide fair recompense to teachers, and (c) to strengthen teachers’ status in society. Research goals were to clarify the ways in which New Horizon was implemented among physical education (PE) teachers, and to examine their attitudes toward the reform and to the changes entailed in implementing it. A survey questionnaire was completed by 381 PE teachers. The study participants reported that changes were positive following the implementation of the reform.

Keywords: educational reform, attitude, change, physical education, teachers

The New Horizon agreement between the Israeli government and the Teachers’ Union representing all teachers in state elementary schools was signed in 2008. The aims of the reform were: (a) to narrow existing gaps in education—that is, to reduce the disparity between the achievements of students from different socioeconomic backgrounds, (b) to improve students’ achievements, (c) to promote and nurture children who have learning difficulties as well as those who are high achievers, (d) to provide fair recompense to teachers, and (e) to strengthen teachers’ status in society (Teachers’ Union and State of Israel, 2008).

In the New Horizon reform document, teachers’ salaries and promotion scales are presented, as are the exact number of frontal hours (traditional teaching of the whole class) teachers must teach, the number of individualized hours they must work, and the number of hours they must be present in school (Teachers’ Union and State of Israel, 2008, clause 30, p. 11). In addition to presenting the potential benefits, the New Horizon reform document contains clauses that may be considered detrimental by some teachers, such as those signifying substantial changes in teachers’ working conditions, including increased work hours, clocking in and out, and cancellation of special *training remuneration* pay for teachers of different subject areas.

The authors are with the Zinman College of Physical Education & Sport Sciences at the Wingate Institute, Netanya, Israel.

The reforms described in the New Horizon document are still in the *transition stage*, as schools move from existing traditional work conditions to the new ones. Transition periods in general are crucial, problematic, and sensitive. Employees must abandon long-ingrained work patterns and adopt new procedures and processes. Transitions are characterized by ambiguity and uncertainty, which almost always make the change process more difficult (Samuel, 1996).

Behavior Change

Opposition to change is a familiar phenomenon in organizations. It stems from the fear of losing one's *security blanket*—a familiar situation with known *rules*, and having to cope with a new situation (Fullan, 2001; Greenberg & Baron, 2000). At times, opposition arises from an inability to grasp the need for change. Other factors that engender opposition are unsuccessful experiences with change in the past and the fear of having to realign relations with other employees in the organization (Greenberg & Baron, 2000). Opposition to change can be expected when individuals or groups believe that the changes will undermine their present status and draw them into situations that may prove disadvantageous to them (Samuel, 1996).

Hall, George, and Rutherford (1977) proposed the Stages of Concern (SoC) model. It posits that along the process of educational change, teachers move through the following stages of concern as they assimilate a reform: awareness, informational, personal, management, consequences, collaboration, and refocusing. In the early stages, teachers feel that they are unfamiliar with the reform and have no interest in learning more about it (awareness); gradually they become interested in the reform (informational), focus on their personal capabilities to implement the proposed changes (personal), and then consider the organization and logistics of the reform (management). In the later stages, teachers contemplate the impact of the reform on student learning (consequences), seek to share experiences with colleagues (collaboration), and suggest modifications to improve the reform or even propose alternatives to the reform (refocusing).

Knowles and Hord (1981) expanded upon Hall et al.'s SoC model and suggested the Concerns Based Adoption Model (CBAM), widely used for planning, personalizing, and evaluating educational change during reform implementation. Their tool can monitor the implementation of changes by an individual or by a team in an innovative school environment. Knowles and Hord (1981) posited that the innovation should be planned thoroughly and include a multicomponent game plan, made up of strategies, tactics, and incidents that must be addressed by all participants to achieve the goal of the new program. In addition, the process of change must be evaluated by feedback loops so that development will be continuous.

Hall and Hord (1987) also elaborated on the SoC model by adding two dimensions, level of use and innovation configurations. Level of use is a stage where performance changes as an individual becomes more familiar with an innovation and more skillful in using it. Innovation configuration refers to an advanced stage within the reform where different operational forms of innovation emerge when the users adapt it to their own particular situations.

Natural resistance to change may hinder a well-planned change and upset its orderly implementation, thereby precluding its completion. Senior managers often do not correctly anticipate the many ways in which people can respond to

organizational change. As a result, they are unable to implement their goals, with the final results differing from those that were planned, and additional fears develop that reinforce the opposition to change (O'Brien, 2008). This seems especially true in schools.

Studies show that where change has been successfully implemented, programs can be upgraded and improved, and that change is led by principals who have strong pedagogical leadership skills, a clear educational vision, complete commitment to the institution's goals and values, and extensive involvement in the change and improvement processes (Fuchs, 1995). As for teachers, House (1996) rhetorically asks why would teachers risk knowledge assets built up over many years by switching to new teaching materials or techniques of unproved quality. Following his line of thought, Hanushek (1994) argued that teachers' improvement depends on rewards for good performance or punishment for bad. He proposed three strategies that might encourage teachers to engage in reforms: increasing the efficiency of resource use, using performance incentives, and encouraging learning from experience.

In a study of the introduction of new curricula at grades 1–5, Helvaci (2009) reported that 52% of the school principals thought that the change was unsuccessful because of teacher opposition. The principals reported that the teachers were not open to change or innovation because they were lazy, afraid of accepting the level of responsibility that came with the change, or too fixed in their ways and thus unwilling to develop. In a recent study about the connection between collective management and the level of opposition to change in two PE organizations in the Iranian Ministry of Education, a negative correlation was found between various dimensions of collaboration, such as collaboration in planning and goal setting, decision making, control and supervision, the implementation of and opposition to change (Asefi, Hamidi, Farahani, & Dehghan, 2010).

Some researchers have proposed ways in which change-makers can prevent resistance and thus better implement change (Helvaci, 2009; O'Brien, 2008; Zimmerman, 2006). O'Brien (2008) recommends that leaders of change avoid facing down opponents, precede change by clarifying its ramifications for those who will be affected by it, involve the staff, provide support, and open negotiations immediately if the change is found to adversely affect working conditions. Likewise, Zimmerman (2006) offered school principals ideas for implementing change and overcoming teacher resistance. These include, among others, sharpening management skills that lead to the development of a collaborative decision-making culture, and encouraging professional development and collegial support. Zimmerman also emphasized the importance of knowing the source of opposition to effectively deal with it. In addition to what these two researchers propose, Helvaci (2009) suggests that the principal should make the staff aware of the necessity for the change by means of seminars and in-service courses.

Evaluation of the New Horizon Educational Reform

The Israel National Institute for Testing in Education (NITE) has been evaluating the New Horizon reform since its inception in the 2007–2008 school year. In their findings (NITE, 2010), they note that 99% of the supervisors and principals, 88% of the teachers, and 85% of the parents expressed satisfaction with and support

for the implemented reforms. Moreover, 71% of the teachers indicated that their work in the school improved. The individualized hours were perceived as the most prominent positive feature of the reform, and as the central element that created change in the school. Teachers who were interviewed as part of the study reported an increase in professional self-efficacy, but they also noted a lack of free hours in school. The feeling of being overloaded was greater among teachers who had taken part in the New Horizon reform than among those who had not (64% vs. 53%, respectively).

Only teachers of subjects linked to national tests were surveyed in the 2010 NITE report, not teachers in subject areas like PE where students do not complete a national test. PE differs from all other subjects taught in school. Applying the reform in PE opens a variety of venues by which the status of PE can be enhanced. Individual hours enable teachers to initiate activities that they previously could not, such as working with children who need extra help and improving their self-confidence, or coaching school teams toward competitions (Aharon, 2011).

Despite the uniqueness of PE, and its importance and contribution to health, information regarding the application of the reform in PE, how teachers perceive the preparation toward it, and their attitudes to change was not included in the NITE report in any way. Having such information available may help in decision making aimed at improving applied aspects of PE teachers' work—decisions that are made at all levels of educational systems by policy makers, school principals, inspectors, teacher educators, and the teachers themselves.

As mentioned by others (Laguardia & Pearl, 2009; Shulman, 1983), it should be kept in mind that teachers play a crucial role in any educational change. Any substantial move in education must go through bottom up change, with teachers demonstrating and documenting the impact that values and education have on each other.

Despite the uniqueness of PE as a subject, reform implementation in PE has not been not examined, nor has it been reported as to how, if at all, teachers were prepared for the New Horizon change and how their opposition to it was overcome. The current study was conducted to provide knowledge about the perspectives PE teachers hold regarding the implementation of the New Horizon reform. Hence, the goals of this study were as follows: (a) to determine the ways the New Horizon reform was implemented, according to reports of PE teachers; (b) to examine the attitudes/perceptions of PE teachers to the reform; and (c) to examine the attitudes/perceptions of PE teachers to the changes entailed in the implementation of the reform.

Method

Participants

The study participants were randomly selected from those PE teachers who attended the 2011 Ministry of Education in-service workshops. The fact that the teachers attended the workshops facilitated the collection of data and ensured a high response rate. Participants were 381 PE teachers, 132 males and 125 females (the remainder did not state their gender), aged 25–66 ($M = 36.75$; $SD = 9.75$), from the country's six school districts (Haifa, 5.2%; South, 6.8%; Tel-Aviv, 13.4%; Jerusalem and

surroundings, 17%; Center, 19.7%; North, 37.8%). The sample was drawn randomly with permission from the Ministry of Education, ensuring a representation of teachers according to population group (Jewish = 221; Arab = 140; other = 20), school level (elementary teachers = 253, middle school teachers = 52, and teachers who teach in both elementary and middle school = 64; 12 did not answer this question), and religious observance (secular = 74%; religious = 11%; other = 15%). A bachelor's of arts or education degree was held by 64% of the participants, a master's of arts in education by 14.7%, and a doctorate by 0.5%. The remaining participants were classified as senior teachers who held no academic degree. The participants' teaching experience distribution, in years, was as follows: 26% with 2–8, 18% 9–17, 20% 18–27, and 5% with more than 27; 25% did not answer this question.

Instruments

A self-report questionnaire was used. Questions/statements about the implementation of the New Horizon reform as applied to PE were included in the first part of the questionnaire. The aim of this part of the questionnaire was to obtain information from PE teachers about (a) the manner in which they implemented the reform in their PE lessons, and (b) the preparation they received for implementing the reform.

The authors of this study developed the first part of the questionnaire. Items were determined by a team of teachers based on the reform's agreement clauses. The first part of the questionnaire was composed of three parts: (a) demographic information (e.g., years of teaching experience, age, percentage of full-time teaching position, professional level, etc.) (question 1), (b) multiple choice questions in which the clauses of New Horizon were translated into the teacher's actual work (questions 2–4), and (c) statements describing situations characteristic of New Horizon and the preparation that was given in school for its implementation (questions 5–6). The last section in the first part of the questionnaire, question 7 (herein called Q7—Changes Since New Horizon), included 30 items. These 30 items were answered on a Likert-type scale ranging from 1 (disagree completely) to 5 (agree wholeheartedly).

In the last part of the questionnaire, question 8 (herein called Q8—Attitude Toward Change), three dimensions of teachers' attitude toward change were examined. The design of the 18 items associated with Q8 was conceptually based on Preister and Petty's (1996) research. These items were answered on a Likert-type scale ranging from 1 (disagree completely) to 5 (agree wholeheartedly). Separate scores were calculated for the three dimensions, desire for change, opposition to change, and conflict experience, for each participant.

Exploratory Factor Analysis (EFA)

Exploratory factor analyses (EFA) were conducted to examine the 30 items contained within Q7 and the 18 items contained within Q8. A principal-components analysis was conducted followed by a Varimax rotation with Kaiser Normalization for each set of questionnaire items.

Results of the EFA for Q7, Changes Since New Horizon, are presented in Table 1. After examining the indicators constituting each factor, their loading values, cross-loadings, and the internal consistencies for each factor, the authors removed indicators 25 and 28 and retained the remaining 28 indicators, which represented

seven factors leaning on the distribution of Eigenvalues on the Scree Plot. In addition, the authors used the 0.40 cut-off point for excluding items not permitting reasonable interpretation (Tabachnick & Fidell, 2013) in any factor, leaving Q7 with six factors that explained 62.50% of the total variance.

Table 1 Exploratory Factor Analysis (EFA) for the Factors Related to the Q7 Items (N = 381)

Item	Factor							Communalities
	1	2	3	4	5	6	7	
16	.786	.245	.054	.151	.014	.134	.003	.72
14	.757	.136	.013	.105	-.109	.118	.157	.65
18	.750	.291	.102	.061	.052	.072	.056	.67
23	.707	.246	.321	.017	-.005	.182	.144	.72
15	.697	.072	.166	.178	.147	.076	-.054	.58
17	.655	.360	.215	.172	-.038	.139	.007	.66
24	.558	-.132	.404	.200	.012	.120	-.021	.55
19	.469	.315	.354	.037	.036	-.062	-.053	.45
12	.184	.680	.039	.168	-.084	.221	-.055	.59
13	.156	.636	.352	.058	-.010	.233	-.018	.61
10	.428	.598	-.079	.055	-.057	.073	.017	.56
11	.336	.544	.071	.455	.006	.011	.076	.63
1	.202	.461	.230	.401	-.055	.085	.256	.54
8	.317	.459	.289	.229	-.037	-.084	.203	.50
20	.327	.169	.670	.142	.059	.177	.125	.66
22	.337	.214	.635	-.005	-.055	.105	.176	.61
21	.533	.287	.598	.085	-.133	.084	.109	.77
27	.060	.112	.122	.800	.164	.174	.067	.73
26	.248	.169	.035	.686	.027	.027	-.063	.57
6	.012	-.024	.004	.053	.830	-.019	.120	.71
5	.128	-.109	-.055	.074	.758	-.032	-.246	.67
30	.114	.116	.137	-.027	.025	.840	-.079	.76
2	.136	.072	-.010	.335	-.098	.621	.121	.55
29	.358	.415	.166	.059	-.032	.547	.042	.63
9	.104	-.106	.082	.032	-.141	-.023	.811	.71
4	-.104	.152	.118	-.064	.505	-.030	.603	.67
3	.132	.238	-.003	.344	-.106	.334	.459	.53
Variance (%)	31.79	7.24	6.12	5.35	4.46	3.93	3.60	
Eigen value	8.90	2.03	1.71	1.50	1.25	1.10	1.01	

Each of the factors was labeled according to the theme of change occurring during the reform and was represented by the indicators in the factor. Factors were labeled as follows: (a) changes among students, indicators 14, 15, 16, 17, 18, 19, 23, and 24; (b) teacher-student relationships, indicators 1, 8, 10, 11, 12, and 13; (c) student involvement in school life, indicators 20, 21, and 22; (d) workshops, indicators 26 and 27; (e) workload, indicators: 5 and 6; and (f) teacher's status, indicators 2, 29, and 30.

Results of the EFA for Q8, Attitude Toward Change, are presented in Table 2. Three factors were labeled: (a) negative attitude to change, indicators 3, 5, 6, 7, 8, 9, 12, 13, 16, and 18; (b) positive attitude to change, indicators 1, 2, 10, 14, 15, and 17; and (c) ambivalent attitude to change, indicators 4 and 11.

Reliability

Reliability was assessed in the form of internal consistency, using Cronbach's alpha coefficient (see Table 3). The Alpha values for each of the factors of part Q7 ranged

Table 2 Exploratory Factor Analysis (EFA) for the Factors Related to the Q8 Items (N = 381)

Item	Factor			Communalities
	1	2	3	
13	.785	.190	-.018	.65
12	.777	.203	.021	.64
16	.776	.038	.260	.67
7	.701	.192	-.010	.52
5	.656	.299	-.322	.62
6	.654	.128	-.358	.57
3	.636	.211	-.306	.54
2	.135	.806	.064	.67
14	.233	.759	.155	.65
1	.248	.751	.023	.63
10	.042	.743	.148	.58
15	.361	.703	.132	.64
17	-.167	.639	-.127	.45
11	-.063	.110	.747	.57
4	-.273	.201	.680	.58
8	-.633	-.094	.385	.56
9	-.630	.196	.379	.58
18	-.530	.033	.240	.34
Variance %	33.55	18.19	6.20	
Eigen value	6.07	3.27	1.17	

Table 3 Descriptive Statistics, Cronbach's Alpha, and Correlations for the Factors Related to Q7 and Q8 (N = 381)

Fs	Descriptive Statistics		Reliability	Correlations					
	M	S.D	Alpha	7.1	7.2	7.3	7.4	7.5	7.6
7.1	3.40	1.03	.895	1					
7.2	3.62	.84	.810	.659**	1				
7.3	3.67	.98	.801	.589**	.706**	1			
7.4	3.60	.92	.665	.416**	.351**	.287**	1		
7.5	3.70	1.10	.675	-.097	-.015	-.049	.107*	1	
7.6	2.84	1.14	.656	.602**	.505**	.453**	.361**	-.116*	1
				8.1	8.2	8.3			
8.1	3.18	.87	.896	1					
8.2	2.58	.94	.793	-.388**	1				
8.3	2.81	.81	.891	.075	.583**	1			

F 7.1 = Changes among students; F 7.2 = Teacher-students relationships; F 7.3 = Students involvement in school life; F 7.4 = workshops; F 7.5 = Workload; F 7.6 = Teacher's status; F 8.1 = Positive attitude to change; F 8.2 = Negative attitude to change; F 8.3 = Ambivalent attitude to change; ** = $p < .01$; * = $p < .05$

from .656 to .895, and the values of part Q8 factors from .793 to .896. Correlations between the factors are also presented in Table 3.

Procedure

Approval for implementation of this study was obtained from three bodies: the College Research Authority, the Israel Inter-College Research Authority, and the Ministry of Education. Questionnaires were distributed via e-mail with the help of the supervisors of the country's six school districts. In addition, teachers were approached by a research assistant at the annual mandatory teachers' meeting in each of the six districts. Participation was on a voluntary basis. Before distributing the questionnaire to the participants, a pilot study was conducted with 30 teachers to determine whether the items clearly and completely reflected the main aspects of the New Horizon reform. The results of this pilot study indicated that the items completely reflected the main aspects of the New Horizon reform.

Data Analysis

Exploratory factor analyses were conducted on the Q7 and Q8 parts of the questionnaire. A principal components analysis, followed by a Varimax rotation with Kaiser Normalization, was conducted on the 30 items of Q7 to determine each indicator's strength of association, to minimize the possibility of error variance, and to simplify the interpretation of each factor, using SPSS software edition 18. The same procedure was applied to the 18 items of Q8. In addition, the reliability

of both sets of items was assessed by means of Alpha coefficients (see Table 3). T-tests were conducted to examine the differences between males and females, Jews and Arabs, young teachers compared with older ones, teachers who teach in elementary school compared with those who teach in middle school, teachers who received preparation toward the reform and those who did not, and those who were required to attend workshops compared with those who were not. Lastly, regression analyses were conducted to explain the variance of both positive and negative attitudes toward change.

Results

The first aim of this study was to examine how PE teachers implemented the reform. Distributions of teachers' activities in "hours for working with individuals" and "stay-in-school hours" were calculated and are presented in Figures 1 and 2, respectively. As can be seen in Figure 1, the most prevalent activity in "hours for working with individuals," as reported by 226 teachers (59% of the participants), was coaching school teams, followed by assisting students who needed help ($n = 212$; 56% of the participants), teaching talented students ($n = 106$; 28% of the participants), and personal talks ($n = 97$; 25% of the participants). As can be seen in Figure 2, the most prevalent activity during "stay-in-school hours" of PE teachers was organizing school events ($n = 205$; 54% of the participants), followed by attending meetings ($n = 176$; 46% of the participants). Each of the other activities reported was performed by at least one third of the participants.

During the school year, 196 teachers attended workshops because they were required to do so by the school principal. Of these, 85% reported that the workshops

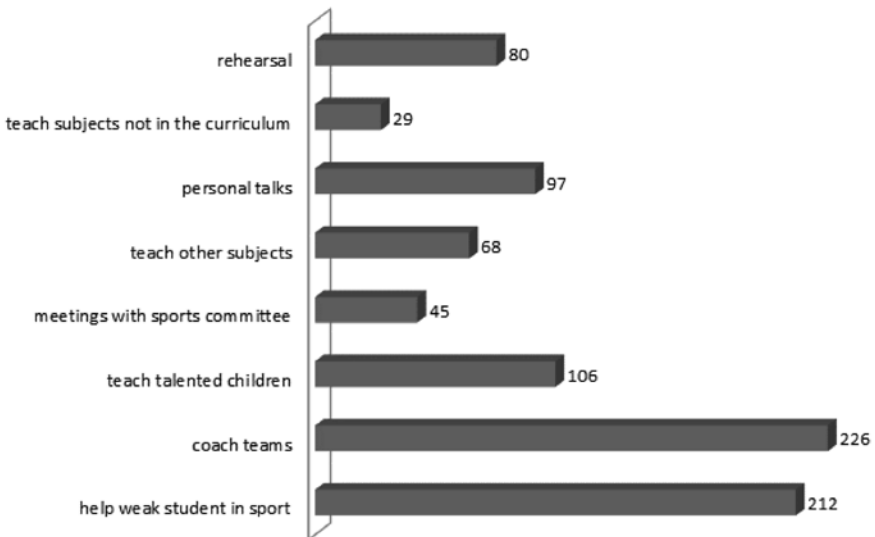


Figure 1 — Distribution of ways to work with individuals.

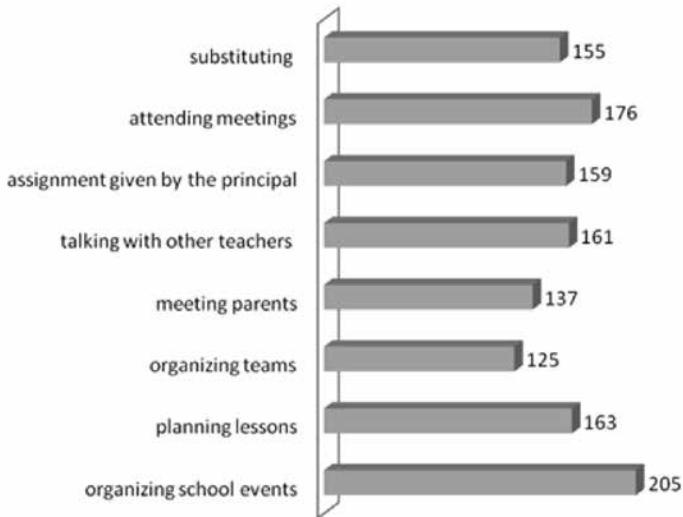


Figure 2 — Distribution of activities done in “stay-in-school” hours.

enriched them professionally. The other 185 teachers attended workshops although they were not required to do so. Regarding staff preparation for the reform, 67% of the teachers reported that preparation was important and contributed to the introduction and implementation of the reform, 25.7% thought that preparation did not contribute to reform implementation, and the remainder did not answer that question.

The second aim of this study was to examine the teachers’ attitudes toward the changes entailed in implementation of the reform. For this purpose, the authors used parts Q7 and Q8 of the questionnaire. Descriptive statistics for the Q7 factors, and the correlations between them, are presented in Table 3. As presented, the highest mean was found for factor 7.5, indicating that workload was reported to be the most strongly endorsed perception of change, followed by factors 7.4, 7.3, 7.2, 7.1, and 7.6, indicating that “teacher’s status” was the least strongly-endorsed perception of change. Descriptive statistics for the Q8 factors (negative attitude to change, positive attitude to change, and ambivalent attitude to change), and the correlations between them, are presented in Table 3 as well. As can be seen, the highest mean was found for factor 8.1, indicating that negative attitude was the most strongly endorsed attitude toward change, followed by factors 8.3, 8.2, indicating that positive attitude was the least endorsed attitude toward change.

The authors examined differences between teachers based on their demographic background. One significant difference was revealed for between males and females in attitude toward change (Q7), specifically item 7.5, “workload” ($t(229) = 4.488, p < .001$). Males perceived a higher workload after the implementation of the reform compared with females. No differences were found for any of the other demographic background variables.

The authors also examined differences between teachers by their demographic background and their attitude to change in general, as reflected in their answers

to the Q8 items. One significant difference was found between Arabs and Jews regarding negative attitude and ambivalent attitude to change. Arabs expressed a higher negative attitude and a higher ambivalent attitude to change than Jews, respectively ($t_{(349)} = -.5.57; p < .001$; $t_{(349)} = -.6.00; p < .001$). No significant differences were found for any of the other demographic background data—males and females, young and older teachers, teachers in elementary and middle school, or those who were required to attend workshops and those who were not required to—regarding the attitude to change factors: positive, negative, and ambivalent. In addition, no differences were demonstrated between teachers who received prereform preparation and those who did not.

Stepwise regression analyses were conducted to determine which variables explained variance in the positive attitude to change (see Table 4). As can be seen, student involvement in school life, prereform preparation, and teacher's status explained 32.7% of the positive attitude to change among PE teachers.

Table 4 Simultaneous Regression Analysis Explaining the Variance of Positive Attitude to Change among Physical Education Teachers

	B	SE	β	t	p
Prereform preparation	.184	.045	.224	4.08	< .001
Students involvement in school life	.264	.062	.296	4.26	< .001
Teacher's status	.131	.048	.172	2.75	.006
Most of the workshop enriched me	.073	.041	.097	1.77	.078
Changes among students	.078	.061	.092	1.26	.207
Teacher-student relationships	-.078	.080	-.082	-1.02	.307
I was obliged to take workshops	-.031	.084	-.055	-.65	.516
Years in the reform	.031	.038	.024	.63	.529
Workload	.031	.039	.025	.62	.533
Workshops	-.001	.055	-.001	-.01	.988

Discussion

The first aim of this study was to clarify the ways in which the New Horizon reform was implemented among PE teachers. Results demonstrate that PE teachers work in a multifaceted environment. They are involved in a variety of activities related to individual students, teams, school life, after-school undertakings, staff relationships, staff duties, and more. Such activities are generally known to be under the umbrella of PE responsibilities (Bowles & O'Sullivan, 2012; McDavid, Cox, & Amorose, 2012; Rink, Hall, & Williams, 2010). Nevertheless, allocating a specific time frame within their teaching position and rewarding them accordingly created a new situation, which increased the possibility that the reform aims would be achieved. It has been documented that successful reforms in educational systems are usually associated with fostering school academic achievements or improving

the school climate (Sweetland & Hoy, 2000). Our participants also reported that since implementation of the reform, they have invested time and effort working with talented students as well as with those who need help. These efforts include organizing school events and school teams, holding personal meetings with students, and engaging in other activities that help to foster student achievements and improve the school climate as a means of achieving the aims of the reform. In fact, working with individual students was perceived as one of the salient characteristics of the reform that created a change in school life.

The second aim of the study was to examine the attitudes/perceptions of PE teachers to the reform. Findings from Q7, *Changes Since New Horizon*, illustrate a positive attitude toward the changes that occurred since the reform was implemented, in relation to the reform's six factors. First, the teachers acknowledged changes in the students' behavior—they show more enthusiasm, are more physically active, and are more willing to try their best. Second, teacher-student relationships have improved—teachers have more time to strengthen interpersonal relationships, both with individuals and with small groups of students. Findings of the current study are in line with Knowles and Hord's (1981) findings, who suggested that there is a three-level hierarchy of teachers' concerns regarding change: self-concerns—their confidence in their ability to act as expected; task concerns—the daily duties of their job; and impact concerns—the consequences of the change for student learning. In line with Knowles and Hord's findings, this study also showed that as impact concerns are diminished, or not mentioned at all, the probability of teachers expressing a positive attitude to the reform increases. Third, students' involvement in school life has increased—they exhibit their feelings of identification with school symbols (such as school sports teams) and events. Fourth, teachers evaluated the workshops in which they participated as important to their professional development. They also appreciated the academic quality of the lectures in the workshops. Fifth, an improvement in teachers' status was also demonstrated, which is undoubtedly associated with a positive attitude.

Although the above five factors indicated a positive association with change, the findings of the "workload" factor showed that teachers—males more than females—perceived a significant increase in workload due to the reform. Increase in workload does not usually imply a positive attitude; in fact, the opposite is more likely. Perception of change in workload is similar to what Hall et al. (1977) described as the personal and management stage of the Stages of Concern (SoC) model, described earlier in this paper. These researchers posit that teachers move through stages of concern as they assimilate reform, in the process of educational change. In the personal stage, they focus on their personal capabilities for implementing the proposed changes, and in the management stage, they consider the organization and logistics of the reform. According to this model, these two stages constitute the middle of the change process. Thus, teachers favor change but they have to adjust and willingly accept the new demands. Hall and Hord (1987) labeled this dimension the "levels of use" of the change, describing how performance changes as an individual becomes more familiar with an innovation and more skillful in utilizing it. Probably, after refining their skills and using them to increase change outcomes, teachers will be less likely to mention workload. They may relate to it with more understanding and accept it as a given and not as a burden, or they will just become accustomed to the extra workload. It will become the standard against which they will measure the next change.

Assuming that teachers favor an organizational change after going through a process of empowerment (Dee, Henkin, & Duemer, 2003; Edwards, Green, & Lyons, 2002), it can be cautiously presumed that by achieving the reform aims, the teachers fostered their status and that of PE in school. They therefore expressed a rather positive attitude toward the change brought about by the reform, including factor Q7.6, teacher's status.

The third aim of the study was to examine the attitudes/perceptions of PE teachers to the changes entailed in the implementation of the reform.

An important element in introducing changes into organizations in general (Anderson & Ackerman Anderson, 2010) and into educational systems in particular (Weiner et al., 2001; Zeichner & Ndimande, 2008) is the quality of staff preparation for the change. The findings show that 67% of the participants positively evaluated the preparation they received for the reform. Still, about one quarter of the participants perceived staff preparation as inadequate and as not contributing to its introduction and acceptance. This result may be attributed to the fact that a quarter of the participants were still in the middle of the change process, where negative attitudes and criticism had not yet been sufficiently overcome (O'Brien, 2008), or that a specific criticism underpinned their position.

This study is innovative in that it relates to the "bright side" of the change of the reform, and the variables that might predict a positive attitude to changes in the school system. Findings show that student involvement in school life, prereform preparation, and teacher's status can predict ($R^2 = .327$) a positive attitude to change among PE teachers. These findings shed light on the importance of teacher-student relationships. Our results show that when teachers perceive their work with students as fruitful, they demonstrate a positive attitude to change. It is known from previous research (Zach, Harari, & Harari, 2012) that when teachers perceive their work with students as fruitful, their teaching efficacy increases. Hence, it is suggested that teaching efficacy and positive attitude to change might be related as well. In addition, prereform preparation plays an important role in reducing resistance to change by giving teachers the needed information that might bring the unknown into the sphere of the known (O'Brien, 2008). The last variable that predicts a positive attitude is teachers' perception of an increase in their status. It is well-documented that PE teachers suffer from a perceived lack of recognition and that their status among the school staff is relatively low (Bechtel & O'Sullivan, 2007; Brandl-Bredenbeck, 2005; Hardman & Marshall, 2005; O'Sullivan, 2006; Ziegler, 2011). The participants of the current study reported feeling better about their status since the reform was implemented. Hence, their improved feelings can be attributed to their positive attitude to the change. Still, we should keep in mind that there is a "dark side" to the change; teachers complain about extra workload, and this attitude should be dealt with carefully by the principal or the school's leaders of the change.

Summary and Conclusions

A national report concerning this reform was conducted but did not include any data from the content area of PE (NITE, 2010). Almost all of the principals, a majority of the teachers, and approximately the same proportion of parents favored the reform in the 2010 study (NITE, 2010). The findings from the current study of PE

teachers' attitudes about the reform are similar to those found in the 2010 report. The majority of the PE teachers surveyed favored the change.

In the current study several limitations must be noted. First, teachers' skills, abilities, or personal characteristics, which could affect attitude toward reform implementation were not taken into consideration. Hence, we should keep in mind that this study describes perceptions and attitudes rather than explaining cause and effect. Second, teacher representation from the various regions in the country is not according to their proportion within the population. Nevertheless, approximately 10% of the PE teacher population in the country participated in this study, which enabled us to make a number of generalizations.

It is recommended that in the future more qualitative research be conducted to examine how to decrease the stages of concern period and enhance full adoption of the changes. For example, researchers should examine which teachers' characteristics and abilities may affect reform implementation, including their pedagogical knowledge, pedagogical beliefs, efficacy beliefs, orientations toward the curriculum, professional identity and status.

Importance of the Research

The findings from the current study can be used to improve upon the implementation of the New Horizon reform in PE. The findings reflect how the additional individualized and in-school hours included in the reform are used, and how teachers perceive the effectiveness of these resources. As the reform is still in the initial transition and implementation stage, the mistakes that were uncovered and reported in the study regarding implementation and problems in preparing teachers for the reform can provide reform overseers, supervisors, principals, and teachers with current information, and provide them with the opportunity to correct errors. The present study sheds light on the effects and ramifications of implementing the reform in the content area of PE. It also provides information about the causes of resistance to the changes engendered by the reform, and the connection between this resistance and the preparations that preceded it. In addition, the findings provide important new information for teacher educators that will enable them to better prepare preservice PE teachers and make them aware of the new tasks they will encounter in their practical work in schools, and subsequently when they enter the system as PE teachers. PE is one example of how subject teachers are coping with the changes embodied in the New Horizon reform. The findings of the current study can also shed light on how teachers of other subjects can cope with the change.

References

- Aharon, E. (2011). *The supervisor's 1st guide*. Jerusalem, Israel: Ministry of Education. (Hebrew)
- Anderson, D., & Ackerman Anderson, L. (2010). *Beyond change management: How to achieve breakthrough results through conscious change leadership* (2nd ed.). San Francisco: Pfeiffer.
- Asefi, A.A., Hamidi, M., Farahani, M., & Dehghan, A. (2010). The study of participative management and resistance to change in physical education organization and physical education department of ministry of education. *Journal of Sport Management*, 3, 5.

- Bechtel, P.A., & O'Sullivan, M. (2007). Enhancers and inhibitors of teacher change among secondary physical educators. *Journal of Teaching in Physical Education*, 26, 221–235.
- Bowles, R., & O'Sullivan, M. (2012). Rhetoric and reality: The role of the teacher in shaping a school sport programme. *Physical Education and Sport Pedagogy*, 17, 303–316. doi:10.1080/17408989.2012.690383
- Brandl-Bredenbeck, H.P. (2005). Comparative physical education – why, what and how? In U. Pühse & M. Gerber (Eds.), *International comparison of physical education: Concepts, problems, prospects* (pp. 19–31). Aachen, Germany: Meyer & Meyer.
- Dee, J.R., Henkin, A.B., & Duemer, L. (2003). Structural antecedents and psychological correlates of teacher empowerment. *Journal of Educational Administration*, 41, 257–277.
- Edwards, J.L., Green, K.E., & Lyons, C.A. (2002). Personal empowerment, efficacy, and environmental characteristics. *Journal of Educational Administration*, 40, 67–86.
- Fuchs, A. (1995). *Change as a way of life in educational institutions*. Tel Aviv, Israel: Cherikover. (Hebrew)
- Fullan, M. (2001). *Learning in a culture of change*. San Francisco, CA: Jossey-Bass.
- Greenberg, J., & Baron, R.A. (2000). *Behavior in organizations* (7th ed.). Upper Saddle River, NJ: Prentice Hall.
- Hall, G.E., George, A.A., & Rutherford, W.L. (1977). *Measuring stages of concern about the innovation: A manual for use of the SoC questionnaire*. Austin, TX: Research and Development Center for Teacher Education, University of Texas (ERIC Document Reproduction Service No. ED 147342).
- Hall, G., & Hord, S. (1987). *Change in schools: Facilitating the process*. Albany, NY: SUNY Press.
- Hanushek, E.A. (1994). *Making schools work: Improving performance and controlling costs*. Washington, DC: Brookings Institution.
- Hardman, K., & Marshall, J. (2005). Physical education in schools in European context: Charter principles, promises and implementation realities. In K. Green & K. Hardman (Eds.), *Physical education: Essential issues* (pp. 39–64). London, UK: Sage.
- Helvacı, M.A. (2009). An evaluation of changes in the curriculum in elementary school level in Turkey. *Education*, 130, 308–322.
- House, E.R. (1996). A framework for appraising educational reforms. *Educational Researcher*, 25, 6–14. doi:10.3102/0013189X025007006
- Laguardia, A., & Pearl, A. (2009). Necessary educational reform for the 21st century: The future of public schools in our democracy. *The Urban Review*, 41, 352–368. doi:10.1007/s11256-008-0115-9
- Knowles, C.J., & Hord, S.M. (1981). The concerned-based adoption model: Tools for planning, personalizing, and evaluating a staff development program. *Journal of Teaching in Physical Education*, 1, 24–37.
- McDavid, L., Cox, A.E., & Amorose, A.J. (2012). The relative roles of physical education teachers and parents in adolescents' leisure-time physical activity motivation and behavior. *Psychology of Sport and Exercise*, 13, 99–107. doi:10.1016/j.psychsport.2011.10.003
- O'Brien, J. M. (2008). Five approaches to leading successful organizational change. *Health-care Financial Management*, 62 (9), 138, 140.
- O'Sullivan, M. (2006). Professional lives of Irish physical education teachers: Stories of resilience, respect and resignation. *Physical Education and Sport Pedagogy*, 11, 265–284. doi:10.1080/17408980600986314
- Preister, J.R., & Petty, R.E. (1996). The gradual threshold model of ambivalence: Relating the positive and negative bases of attitudes to subjective ambivalence. *Journal of Personality and Social Psychology*, 71, 431–449. doi:10.1037/0022-3514.71.3.431
- Rink, J., Hall, T., & Williams, L. (2010). *Schoolwide physical activity: A comprehensive guide to designing and conducting programs*. Champaign, IL: Human Kinetics.

- Samuel, I. (1996). *Organizations – Characteristics, structures and processes* (2nd ed.). Tel-Aviv, Israel: Zmora-Bitan. (Hebrew)
- Shulman, L.S. (1983). Autonomy and obligation, the remote control of teaching. In L.S. Shulman & G. Sykes (Eds.), *Handbook of teaching and policy* (pp. 484–504). New York: Longman.
- Sweetland, S., & Hoy, W.H. (2000). School characteristics and educational outcomes: Toward an organizational model of student achievement in middle schools. *Educational Administration Quarterly*, 36, 703–729. doi:10.1177/00131610021969173.
- Tabachnick, B.G., & Fidell, L.S. (2013). *Using multivariate statistics* (6th ed.). New York: Harper & Row.
- Teachers' Union and State of Israel. (2008). *Ofek Hadash reform agreement between Teachers' Union and Government of Israel*. Hebrew. Retrieved from <http://cms.education.gov.il/NR/rdonlyres/A450C710-9D25-42E8-A7AF-444482E325FF/87491/heskemreforma.doc> (Hebrew)
- The Israeli National Institute for Testing in Education (NITE). (2010). Evaluation of “New Horizon” after completing two years of implementation in elementary schools. Reform implementation and comparative examination of schools achievements and schools climate. Jerusalem, Israel: Ministry of Education. (Hebrew)
- Weiner, L., Rand, M., Pagano, A., Obi, R., Hall, A., & Bloom, A. (2001). Illuminating the impact of state educational policy promoting school reform on curriculum and instruction in programs of urban teacher preparation. *Educational Policy*, 15, 644–673. doi:10.1177/0895904801015005002
- Zach, S., Harari, I., & Harari, N. (2012). Changes in teaching efficacy of pre-service teachers in physical education. *Physical Education and Sport Pedagogy*, 17, 447–462. doi:10.1080/17408989.2011.582491
- Zeichner, K., & Ndimande, B. (2008). Contradictions and tensions in the place of teachers in educational reform: Reflections on teacher preparation in the USA and Namibia. *Teachers and Teaching*, 14, 331–343. doi:10.1080/13540600802037751
- Ziegler, E.F. (2011). A new principal principle (#14) of physical activity education is emerging. *Physical Educator*, 68, 115–117.
- Zimmerman, J. (2006). Why some teachers resist change and what principals can do about it. *NASSP Bulletin*, 90, 238. doi:10.1177/0192636506291521

APPENDIX A

1. Personal Details

Name (optional) _____ e-mail (optional): _____

Education: Senior Teacher B.A. M.A. Ph.D.

Completing studies for _____ degree

Age (years) _____

Gender: Male / Female

Teaching experience: ___ years Full time/Part-time teacher. Joined New Horizon in 20___

When joining New Horizon, I received Promotion Level ____. Present level: 1 2 3 4 5 6 7 8 9

Teach following grades (circle): K 1 2 3 4 5 6 7 8 9

Sector: Jewish / Arab

Teach in State / State Religious / Other / Special Education school system. District: _____

I am a teacher-mother: Yes / No Other positions in school this year: _____

2. What do you do in the individualized hours (you may circle more than one answer)

- a. Give extra practice to children who are weak in sports
- b. Coach the school team in athletics / basketball / soccer / volleyball / gymnastics
- c. Help sport-talented children to progress
- d. Conduct meetings with the school sports committee
- e. Teach other subjects such as Hebrew, math, and English individually (up to 5 children in a group)
- f. Conduct personal conversations with students
- g. Teach subjects not in the curriculum to small groups
- h. Prepare shows/events for ceremonies and holidays
- i. Other: _____

3. What do you do in your in-school hours?

- a. Organize school events
- b. Plan lessons
- c. Organize the school team
- d. Meet or conduct discussions with parents
- e. Meet with teachers, homeroom teachers, and counselors to discuss their class or specific students
- f. Set up the gym and equipment
- g. Complete tasks assigned by the school management:
 1. Connected to Physical Education
 2. Not connected to PE (work in library, photocopying, etc.)
- h. Attend teachers' meetings
- i. Substitute for other teachers
- j. Other: _____

4. **a. Are you taking inservice workshops this year? Yes / No**
 1. Type of course: _____
 2. Course is 60 hours / 90 hours / 180 hours / more
b. So far I have participated in _____ inservice workshops as part of New Horizon
5. **Mark the most appropriate answer to each of the following statements:**

	1 Absolutely not	2	3	4	5 Definitely yes
1. Most of the inservice workshops were related to PE	1	2	3	4	5
2. Most of the workshops were about education in general	1	2	3	4	5
3. Most of the workshops enriched me professionally	1	2	3	4	5
4. I took workshops because the principal obligated me to take them	1	2	3	4	5
5. I took workshops because the PE supervisor obligated me to take them	1	2	3	4	5

6. **Preparation for the reform. Mark the most appropriate answer to each statement.**

	1 Absolutely not	2	3	4	5 Definitely yes
a. The school management prepared the teachers for the reform	1	2	3	4	5
b. I understood the significance of the reform even before it began in the school	1	2	3	4	5
c. Pre-reform staff meetings prepared me for the future	1	2	3	4	5
d. The preparatory activities in workshops and meetings were effective	1	2	3	4	5
e. The school principal was the most dominant figure in preparing for the reform	1	2	3	4	5

7. **The following statements deal with the changes since New Horizon was implemented. What is your opinion about each of them?**

In my opinion:	Absolutely disagree				Agree whole- heartedly
1. The individualized hours are utilized well	1	2	3	4	5
2. The initial promotion level I received corresponds to my qualifications and experience	1	2	3	4	5
3. The in-school hours are utilized well	1	2	3	4	5
4. The in-school hours are insufficient for all the tasks I have to accomplish	1	2	3	4	5
5. There are too many teaching hours	1	2	3	4	5
6. Personnel in special positions have too much work	1	2	3	4	5
7. Clocking in and out is superfluous	1	2	3	4	5
8. Students have progressed in their athletic achievements	1	2	3	4	5
9. There are too many in-school hours	1	2	3	4	5

10. The students are more relaxed	1	2	3	4	5
11. Close ties have been developed with the students	1	2	3	4	5
12. I have enough time to deal with most of my students personally	1	2	3	4	5
13. I am better able to prepare the school teams	1	2	3	4	5
14. The students like PE lessons more now	1	2	3	4	5
15. I am able to instill values in the students	1	2	3	4	5
16. The students feel they are more capable to perform the tasks in the lessons	1	2	3	4	5
17. Students have a greater feeling of belonging to the school	1	2	3	4	5
18. Students are willing to try more difficult elements in sports	1	2	3	4	5
19. The students practice at home	1	2	3	4	5
20. Students are willing to join the school team	1	2	3	4	5
21. Students participate more in sports events	1	2	3	4	5
22. Students come to cheer on the school teams	1	2	3	4	5
23. The students are more active in the lessons	1	2	3	4	5
24. The students come to class in sports clothes	1	2	3	4	5
25. There is a correlation between the hour a workshop is given and its effectiveness	1	2	3	4	5
26. Most of the workshops contributed to my professional development	1	2	3	4	5
27. The quality of the teachers in most of the workshops was good	1	2	3	4	5
28. I use more varied teaching methods	1	2	3	4	5
29. There has been a significant improvement in the status of the PE teacher	1	2	3	4	5
30. My salary today is commensurate with my work	1	2	3	4	5

8. Attitude towards change

Imagine how a transition from the way your school system is managed today to management according to a new educational reform would affect you and the school. To what extent do you agree with each of the following statements?

	Completely disagree				Agree wholeheartedly
1. In general there is a good chance that the change will lead to an improvement in the current situation.	1	2	3	4	5
2. Thinking about my work today, it seems to me that my situation will be better in few aspects after the change.	1	2	3	4	5
3. I have objections to the change.	1	2	3	4	4

4. I have good reasons to object to the change but at the same time I have good reasons to want it.	1	2	3	4	5
5. The proposed change bothers me.	1	2	3	4	5
6. In general I will have problems adapting to the change.	1	2	3	4	5
7. I don't understand why this change is needed.	1	2	3	4	5
8. With regard to my position concerning the change, I feel in conflict.	1	2	3	4	5
9. My attitude about the expected change keeps on changing.	1	2	3	4	5
10. I am enthusiastic about the innovation the change will bring.	1	2	3	4	5
11. I see both positive sides and negative sides in the change.	1	2	3	4	5
12. I am willing to sign a petition against the change.	1	2	3	4	5
13. The change seems superfluous to me.	1	2	3	4	5
14. Personally I will benefit from the change.	1	2	3	4	5
15. I believe that in the future the change will benefit the organization.	1	2	3	4	5
16. I am willing to do things to prevent the change.	1	2	3	4	5
17. In conversations with my friends I will express my opinion in favor of the change.	1	2	3	4	5
18. If I didn't know something good is also expected from the change I would object to it unequivocally.	1	2	3	4	5

Copyright of Journal of Teaching in Physical Education is the property of Human Kinetics Publishers, Inc. and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.