Research Paper

Effectiveness of the Hidden Curriculum on Affective Attitudes of High School Students Toward Learning

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Citation Raissi Ahvan Y, Shaykhei Fini AA, Zainalipour H. Effectiveness of the Hidden Curriculum on Affective Attitudes of High School Students Toward Learning. Journal of Research & Health. 2021; 11(6):423-434. http://dx.doi.org/10.32598/JRH.11.6.1925.1

http://dx.doi.org/10.32598/JRH.11.6.1925.1

Article info:
Received: 24 Jul 2021
Accepted: 11 Sep 2021
Publish: 01 Dec 2021

Keywords:
Affective attitude, Hidden curriculum components, Learning

ABSTRACT

Background: The effectiveness of the hidden curriculum is stronger than the explicit curriculum from the perspectives of curriculum experts and medical education specialists. These effects are especially strong in transmitting values, norms, and medical professionalism. So, the importance of the hidden curriculum and its impact on educating medical students is undeniable. The present study aimed to explore the effect of the hidden curriculum components on affective attitudes of students toward learning, and to create a better learning and educational setting.

Methods: The research was a mixed-method using a cross-sectional survey in the quantitative section. A case study (phenomenological analysis of lived experience type) and the interviews were used in the qualitative part. The study population consisted of 277 male high school students in District 1 of Bandar Abbas Port, Iran, in the 2019-2020 academic year. They were selected through the cluster sampling method and randomly assigned to the experimental research.

Results: The results of multiple regression analysis showed a correlation (0.627) between the components of the hidden curriculum with affective attitudes of learning (P<0.95). The quantitative findings showed the mean scores of most components in exceptional talents (SAMPAD) high school students were significantly higher than the mean scores in public and non-public high schools students (P<0.05). Moreover, the results of the path analysis showed that the hidden curriculum has a positive and significant relationship with the three components of affective attitudes of students toward learning..

Conclusion: Generally, the hidden curriculum plays a vital role through the implicit transfer of values, attitudes, and skills to students, especially on affective attitudes, so that these issues should receive more attention by the educators in every educational setting.

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1. Introduction

Schools in the third millennium possess the legacy of those ideas on which the glorious human civilization has been founded in science and technology areas. Appreciating such achievements and enriching such treasures of human wisdom and knowledge is a mission that is closely linked to educational institutions in today's world [1]. The school is the most important social institution that provides equal educational opportunities for individuals. Although preparing children for adult life is a common goal of society and school, it is certainly not a simple task. It makes the task difficult due to conflicting visions of adult life [2]. Achieving society's vision is the responsibility of schools, and that vision has been translated into school goals. All school experiences presented to meet the community's needs make up a school curriculum [3]. The curriculum is one of the most important tools and elements for achieving educational goals and missions. Thus, the school tries to transfer different types of knowledge and skills to learners through designing and developing a specific curriculum to prepare them to take on their roles and responsibilities in life [4].

There are different types of curricula that educators have to address in the classroom. Eisner stated that all schools teach three curricula: the explicit, the implicit, and the null [5].

Within the recent decades, a growing interest has arisen in grasping the implicit, tacit, invisible, unofficial, and non-academic aspects of school life, that is, the "hidden curriculum", which is considered as an integral part of school activities [6]. Curriculum planners and educators believe that schools often teach pre-defined goals that are an integral part of school activities besides intentional and guided learning [7]. Historically, the notion of the hidden curriculum has had a range of definitions. Some scholars referred to the same concept using different names, such as "unstudied" curriculum, the "covert" and "latent" curriculum, "non-academic outcomes of schooling", "residues of schooling", and "by-products of schooling" [8].

Vallance defined the hidden curriculum as a phenomenon that had "non-academic but educationally significant consequences of schooling" and occurred systematically but implicitly in schools [8]. Nowrouzi et al. pointed out that the hidden curriculum is classically defined as the unwritten, unofficial, and often unintended lessons, values, and perspectives that students learn in school [9].

The hidden-curriculum concept is based on the recognition that students absorb lessons in school that may or may not be part of the formal course of study, for example, how they should interact with peers, teachers, and other adults; how they should perceive different races, groups, or classes of people; or what ideas and behaviors are considered acceptable or unacceptable [10]. The hidden curriculum is described as "hidden" because it is usually unacknowledged or unexamined by students, educators, and the wider community. Because the values and lessons reinforced by the hidden curriculum are often the accepted status quo, it may be assumed that these "hidden" practices and messages do not need to change, even if they are contributing to undesirable behaviors and results, whether it is bullying, conflicts, or low graduation and college-enrollment rates [8].

It should be noted that a hidden curriculum can reinforce the lessons of the formal curriculum or contradict the formal curriculum, revealing hypocrisy or inconsistencies between a school's stated mission, values, and convictions and what students experience and learn while they are in school [11]. Thus, the hidden curriculum should be considered one of the conceptual capitals of the curriculum course. This concept avoids looking at the curriculum as a superficial phenomenon and considers it at the implementation level with tracking its dynamics [12].

Based on Bloom's theory of school learning, if there is a system of schooling which is virtually error-free or with a significant reduction in error, it is expected that most learners attain a high level of learning, with a relatively small amount of variation at levels of learning achieved, and at a minimal amount of variation in the learning time required [12]. Bloom has selected three interdependent variables, which, if properly attended to, should enable schools to approximate an error-free system of education. The three interdependent variables which are central to this theory of school learning are 1) the extent to which the student has already learned the essential prerequisites to the learning to be accomplished (cognitive entry behaviors), 2) the extent to which the student is (or can be) motivated to engage in the learning process (affective entry behaviors), and 3) the extent to which the instruction to be given is appropriate to the learner (quality of instruction) [13]. More specifically, Bloom's theory deals with student characteristics, instruction, and learning outcomes [14].

In this study, our concern is the affective characteristics of learning which consists of three parts: subject-related affect, school-related affect, and academic self-concept.

1-Subject-related affect: we regard subject-related affect as a resolution between the perception of the past (what the individual believes to be related tasks) and perception of the relation between the present task and the prerequisite learning and future goals and purposes of the individual [15].

2-School-related affect: by school-related affect, we mean a general disposition to regard the school and school learning positively or negatively. If the student develops a negative (or positive) affect toward school, this affect may include the school subjects, the teachers and staff, and even the whole idea of school and school learning. We believe that different amounts of failure (or success) may be needed for different students to develop this negative or positive affect toward school [15].

3-Academic self-concept: we should keep in mind that the academic self-concept is an index of the student's perception of himself/herself in relation to the achievement of the other learners in his/her school class [15].

The positive consequences of the hidden curriculum are healthy habits, scientific and spiritual interests, artistic taste and aesthetics, good morals, conscientiousness, respect for humanity, healthy competition, collaboration, and altruism. Despite the profound impact on formal curricula in the field of values and norms on learners and students, these consequences are not approved by the official schools and university administrators and have been neglected in Iranian schools and universities. Most curriculum experts and medical education professors have compared the effects of the hidden and explicit curricula and concluded that the impact of the hidden curriculum in terms of education, especially in transferring values and norms, is far stronger than the explicit curriculum. In the training of medical students and specialists, besides the knowledge and skills, we must pay more attention to the development and strengthening of the values, attitudes, norms, social skills, and other characteristics that shape the behavior of physicians, as well as the role of the hidden curriculum. Therefore, the importance and the effects of the hidden curriculum in medical education are undeniable, so that Cohen asserts that perhaps more than ever, we should pay attention to the hidden curriculum in the training of physicians [16].

Many studies have been done on the hidden curriculum. For example, Kian et al. showed that the hidden curriculum has a strong relationship with creativity, especially in terms of school social climate. It can be concluded that the hidden curriculum plays a vital role through the implicit transfer of values, attitudes, and skills to students, which needs more attention in every educational setting [17].

Abbaspour et al. conducted a qualitative study to investigate the experiences of nursing students of the Midwifery Faculty of Mashhad University of Medical Sciences regarding the hidden curriculum. Through open interviews, students were asked about their understanding of the hidden curriculum, learning experiences from the hidden curriculum, and the hidden curriculum resources. The results showed that students considered the hidden curriculum more important than formal and explicit curriculum and believed that this curriculum had created more stable behaviors in them and ultimately led to positive learning, such as professional ethics, work conscience, critical thinking as well as negative learning, such as wrong and routine performance and hypofunction. The overall result of this study indicated that the hidden curriculum effectively forms the beliefs, culture, and personality of the learners [18].

Taghvaei Yazdli et al. in their research entitled "The relationship between the hidden curriculum and emotional intelligence of students of Kashan Medical Sciences University," concluded that the hidden curriculum greatly impacts students' emotional intelligence, and lack of attention to the hidden curriculum is one of the barriers to professionalism [19].

Mehrmohammadi and Fathi studied the position of the hidden curriculum in continuing medical education. They concluded that in clinical skills training, there are opportunities to consider and pay attention to the hidden and explicit effects of practical and educational content. Through dialogue and negotiations and meetings in clinical medical education, we can advance the findings and awareness of physicians. From their point of view, physicians and medical education participants are not immune from the effects of the hidden curriculum, and identifying and paying enough attention to the hidden curriculum leads to a better and more comprehensive understanding of integration and change in continuous education programs and affects physicians' interpersonal relationships and their treatment decisions [5].

Lampe et al. researched 36 medical students to determine their views on their education quality through the hidden curriculum. The students pointed to positive issues, such as effective role models and availability of professors, as well as negative issues, such as the existence of hierarchical and competitive atmosphere, stoic education, and teaching in a humiliating manner, especially during clinical, educational years in this medical university [20].

Vahid Fallah et al. investigated the role of the hidden curriculum components in high school students toward learning. In their research, they concluded that school rules and regulations, interpersonal relationships, and teacher-student interactions are influential factors and components in students' learning [21].

Samiee Zafarghandi examined the relationship between the hidden curriculum components (teachers' interaction with students, school rules and regulations, teaching methods of teachers, and teachers' evaluation methods) with the emotional intelligence of students. Findings showed that among the studied components of the hidden curriculum except for school rules and regulations, other components of teachers' teaching methods, teacher evaluation, and teachers' interaction with students had a positive and significant relationship with students' emotional intelligence [22].

Amini et al. conducted a study entitled "Reviewing and explaining the hidden curriculum from the viewpoints of students of Kashan Medical Sciences University". Findings showed that three variables, namely physical space and environment, behavioral and personality traits of faculties, and their evaluation methods, have the highest mean. Thus, these three variables have hidden and unexpected effects and implications, and consequently, they have negative and desirable influences on the behaviors and learnings of medical university students. It is necessary and important that physical space and environment, behavioral and personality traits of faculties, and their evaluation methods be changed and reformed. These changes facilitate actual learning and prevent the formation of negative attitudes among medical students [23].

Abroampain, in his study, sought to explore the extent to which the hidden curriculum can be used to develop skills, values, and attitudes for learners to teach and develop the affective domain. The findings showed that the learners learned more than what they were taught in class, and what they acquired from the school's culture stayed much longer with them [24].

Cubukca reported that students are exposed to many values through both formal (explicit) and the hidden curriculum in schools, but the hidden curriculum is more efficient in teaching values. In his study, he aimed to determine supportive activities and views of students who participated in these activities to reveal the importance of the hidden curriculum on gaining values within character education in elementary schools. At the end of the study, it was found that values are included in the curriculum of elementary schools, and supportive activities for the hidden curriculum in the process of gaining and internalizing values are important [25].

In this study, all three dimensions (social, cognitive, and physical) of the hidden curriculum are addressed with an integrated approach. The researchers identified and formulated major components or categories which encompass the characteristics of the hidden curriculum. These components became the framework for the research conducted in our study and formed the basis for a school's self-evaluation of the hidden curriculum. It is evident that these components are related to each other, to the school environment, the teachers, and the staff. These components of the hidden curriculum were explained as follows. Teachers' interactions (relationships) with students, in other words, social relationships between teachers and students and among students, provide insight into a program's hidden curriculum. These messages may also affect relationships among students. For example, if the teacher continuously interrupts students, the implicit message is that students' words and thoughts are less important than the teacher's. Also, because the students are interrupted by the teacher, students may assume that it is alright to interrupt one another. Teachers who model more courteous behavior send the message that it is inappropriate to interrupt others but value what each student has to say, and so should the students [26].

The architecture and physical setting of an educational center, in other words, the physical structure of the school and classroom, can also evoke certain perceptions in students' minds. Several experts believe that nonverbal teaching and behaviors are more influential than other factors in transferring messages to learners [27].

A review of specialized and organized resources in the field of curriculum shows that no attempt has been made to document the positive or negative effects of the hidden curriculum on the affective attitudes of learners in Iran so far.

Objectives

The main objective of this study is to identify the effects of the hidden curriculum components on students' affective attitudes towards school, subjects, and textbooks, as well as its impact on their academic self-concept in public, private, and exceptional talents (SAMPAD) high schools. The present study addressed the following questions:

Q1: What is the effect of the hidden curriculum components on students' affective attitudes toward learning?

Q2: Are there any significant differences between the hidden curriculum components in public, private, and exceptional talents (SAMPAD) high schools?

Q3: Are there any significant differences between the affective attitudes of students' learning in public, private, and exceptional talents (SAMPAD) high schools?

2. Methods

The research method was a mixed-method. We used a cross-sectional survey in the quantitative section. Also, a case study (phenomenological research of lived experience type) and the interviews were used in the qualitative part.

Study participants

The study population consisted of all male high school students in District 1 of Bandar Abbas Port, Iran, in the academic year 2019-2020. According to Morgan's table, 277 subjects were selected using the cluster random sampling method. Out of all secondary levels high schools for boys in Bandar Abbas, seven high schools were selected, including three public high schools (138 students), three private high schools (76 students), and one exceptional talent (gifted) high school (63 students). The students were interviewed, investigated, and then they were asked to complete and respond to the questionnaires. The questionnaires were based on the hidden curriculum components and students' affective attitudes chosen by the researchers to collect data and assess them.

Instruments

Hidden Curriculum Questionnaire

The hidden curriculum questionnaire consists of 29 closed-ended items created by Shaykhei (2008). It is scored on a 5-point Likert-type scale from very high=5 to very low=1. The Cronbach α coefficient for the whole sample was 0.87. In this study, the Cronbach α coefficient of this questionnaire showed a total estimation of 0.84, indicating that the instrument had a good degree of reliability. In the current study, 15 experts confirmed the validity of this questionnaire (Content Validity Index [CVI]=0.85, Content Validity Ration [CVR]=0.92).

Affective Attitudes of Learning Questionnaire

The affective attitudes questionnaire consists of 70 closed-ended items developed by Saif, Dellavar, and Maleki (2007). The items are scored on a 5-point Likert-type from 1=completely disagree to 5=completely agree. The Cronbach α coefficient for the whole questionnaire was 0.78. In this study, the Cronbach α coefficient of this questionnaire showed a total estimation of 0.76, indicating that the instrument had a good degree of reliability. In the current study, 15 experts confirmed the validity of this questionnaire (CVI=0.81, CVR=0.89).

Interview

Semi-structured interviews with standardized open-ended questions and informal conversations were held with students. We also used the chronological method for recording students' lived experiences.

Study procedure

This study was performed in two phases. In the first phase, the participants were asked to respond to both questionnaires. To ensure confidentiality and reduce the effects of response bias, the participants were provided with a cover letter that had a written description of the purpose of the study. They were informed that participation in the study was voluntary, and their responses would not be personally identifiable. In the second phase, the researcher interviewed participants to ascertain their perceptions of the emphasis on the characteristics of the hidden curriculum. The researcher used an open-ended interview schedule. The purpose of the non-directive questions was to give the participants an opportunity to open a wide range of discussion topics and to avoid "leading" them in their responses. The interviews were conducted and held in an office or the schools' library and usually took 35 to 40 minutes. After administrating the questionnaires, the SPSS software was used to perform various statistical computations and data analyses.

3. Results

Structural equation analysis was used to investigate the effects of the hidden curriculum components on affective attitudes of learning. The studied model, along with the indicators related to the model fit, are presented below.

Figure 1 shows the significant coefficients of the model related to the relationship between the hidden curriculum components and the affective attitudes of learning. Based on the obtained results, all coefficients related to the factor loads of the measurement model are greater than 2.58 and are significant ($P<0.01$). The strength of the relationship between the hidden curriculum components and the affective attitudes variables by the factor load showed that the factor load of more than 2.58 was a strong relationship. Therefore, accuracy in the operating load of these variables showed that all factor loads and

their output were more than 2.58, which indicated that all items were acceptable and the fitness of the structural model was confirmed.

The indicators related to the model fit are presented in Table 1 presented the fitness indices of the model, which confirm the appropriateness of the model. The degree of freedom for the Chi-square ratio (χ^2/df) confirmed the model's fitness, which was less than 3, and means that the model fits the data. The Root Means Square Error of Approximation (RMSEA) was 0.069, and the Standardized Root Mean square Residual (SRMR) was 0.063, which was less than the criterion (0.08), thus confirming the fitness of the model. Finally, IFI (Incremental Fix Index), CFI (Comparative Fit Index), NFI (Normed Fit Index), and RFI (Relative Fit Index) indices were larger than the desired criterion (0.9). In general, considering the total calculated fit indices, the fitness of the structural model was confirmed.

The present study aimed to explore the effects of the hidden curriculum components on affective attitudes of students toward learning in public, private, and exceptional talents (SAMPAD) high schools. In this study, the hidden curriculum components are the independent variables, and students' attitudes toward subjects, textbooks, school, and students' self-concept are the dependent variables. In the present section, the data collected from the studied subjects through the hidden curriculum components and the non-cognitive (affective attitudes) questionnaires were analyzed using appropriate statistical techniques, and the research questions were tested. To this end, the descriptive statistics indices were used to describe and classify the collected data. Also, the multivariate analysis of covariance was used to test the questions.

Q1: What are the effects of the hidden curriculum components on the students' affective attitudes of learning?

According to Table 2, the standard coefficient value is equal to (0.67), and the test statistics value is greater than 1.96. Considering the small significance level obtained from the value of 0.01, the research hypothesis on the relationship between the hidden curriculum components and the affective attitudes of students toward learning is confirmed.

Multiple regression test was used to investigate the relationship between the hidden curriculum components on students' affective attitudes toward learning.

In Table 3, the results of the analysis of variance are presented to investigate the regression model. Based on the results, the obtained F value is 6.148, which is significant at the alpha level less than 0.01, showing that hidden curriculum components can explain the changes in students' affective attitudes of learning and the suitability of the proposed regression model. Considering that the value of the tolerance statistic is greater than the shear value of 0 (1.0) and the statistic of variance inflation factor is less than the shear value (10), the collinearity assumption has not been violated. The results of multiple regression

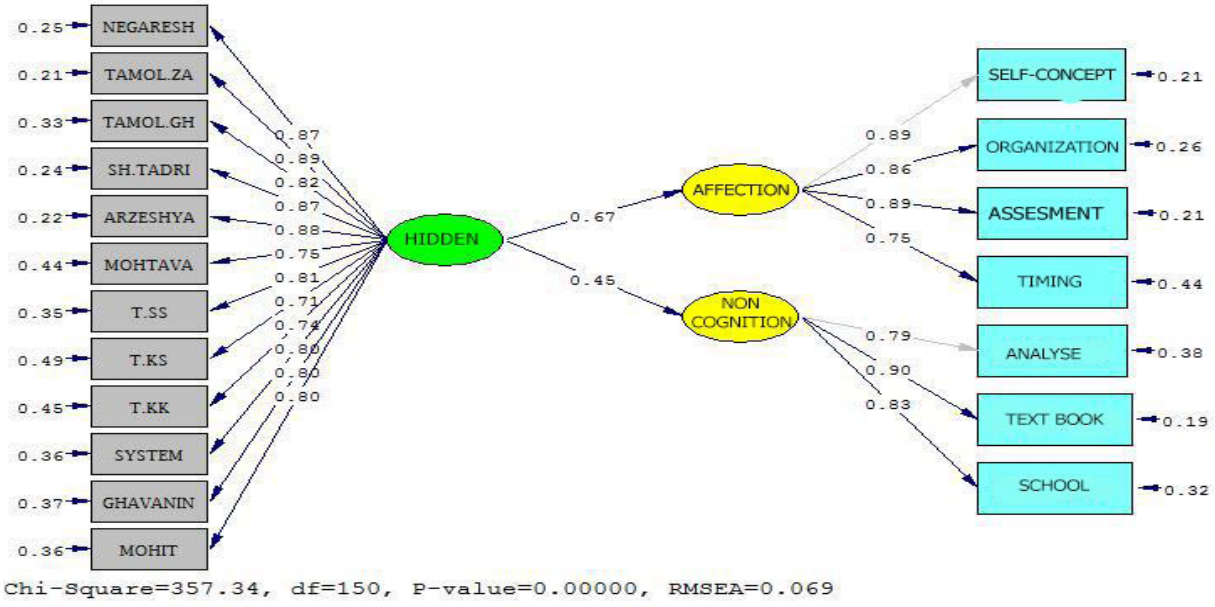

Figure 1. Significance coefficients of the model related to the relationship between the hidden curriculum components and the affective attitudes of learning

Table 1. Model of fit indices

Fit Index	Acceptable Domain	Observed Value	Fit Index Valuation
χ^2/df	<0.3	2.38	Appropriate
IFI	>0.9	0.97	Appropriate
RFI	>0.9	0.95	Appropriate
RMSEA	<0.08	0.69	Appropriate
SRMR	<0.08	0.63	Appropriate
CFI	>0.9	0.97	Appropriate
NFI	>0.9	0.96	Appropriate

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df: Degree of freedom; IFI: Incremental Fix Index; RFI: Relative Fit Index; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean square Residual; CFI: Comparative Fit Index; NFI: Normed Fit Index.

Table 2. Path coefficient of the relationship between hidden curriculum components and the affective attitudes of learning

Path	Standard Coefficient	Statistics (T)	Level of Significance
Hidden curriculum → Affective attitudes of learning	0.67	6.93	0.01

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analysis confirm the impact of the hidden curriculum components on affective attitudes in public, private, and exceptional talents (SAMPAD) high schools.

Q2: Are there any significant differences between the hidden curriculum components of public, private, and exceptional talents (SAMPAD) high schools?

The Multivariate Analysis of Variance (MANOVA) test was utilized to compare the hidden curriculum components among students of public, private, and gifted (SAMPAD) high schools. The results of this test, along with the study of its assumptions, are presented in Table 4.

The Bonferroni post hoc test was applied to compare the differences between the scores of the hidden curriculum components in students of public, private, and exceptional talents (SAMPAD) schools. The results showed that the mean score of the teachers' interactions with students in exceptional talents (SAMPAD) high school (82.34) is significantly higher than the mean scores in public (51.69) and private (56.18) high schools (P<0.05).

The mean score of the methods of teaching and teachers' evaluation of exceptional talents (SAMPAD) high school (78.00) is significantly higher than the mean scores in public (52.48) and private (62.21) high schools (P<0.05). The mean score of physical environments and facilities in exceptional talents (SAMPAD) high school (79.88) is considerably higher than the mean scores in public (55.15) and private (70.93) high schools (P<0.05). Other pairwise comparisons were not significant (P>0.05).

Q3: Are there any significant differences between the affective attitudes of students' learning in public, private and exceptional talents (SAMPAD) high schools?

Table 3. Test results related to analysis of variance

Level of Significance	F	Mean Squares	Degree of Freedom	Sum of Squares
Regression	6.148	751.722	12	9020.664
Residues		62.959	264	16621.213
Total			276	25641.87

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Table 4. Statistical description of the scores of the hidden curriculum components of public, private, and gifted (SAMPAD) high school

Statistical Index	Mean±SD		
	Public	Private	Gifted (SAMPAD)
Teachers' interactions with students	51.69±9.161	56.18±8.926	82.34±8.775
Staff's interactions with students	21.43±4.761	58.75±7.828	76.72±7.129
The content of the textbooks	22.22±4.359	23.49±4.474	38.34±6.491
Methods of teaching and teachers' evaluation	52.48±9.229	62.21±10.977	78.00±11.955
Physical facilities	55.15±10.34	70.9±12.14	79.88±12.881

The Bonferroni post hoc test was applied to compare the differences between the scores of affective attitudes of learning in students of public, private, and exceptional talents (SAMPAD) high schools. Based on the results, the mean score of students' attitudes toward subjects and textbooks in exceptional talents (SAMPAD) high school (67.54) is significantly higher than the mean scores in public (51.33) and private (57.66) high schools ($P<0.05$). The mean score of students' attitudes to school in exceptional talents (SAMPAD) high school (78.25) is significantly higher than the mean scores in public (56.78) and private (68.84) high schools ($P<0.05$). The mean score of students of academic self-concept in exceptional talents (SAMPAD) high school (75.56) is significantly higher than the mean scores in public (53.37) and private (67.83) high schools ($P<0.05$) (Table 5).

To analyze the qualitative findings obtained from the (hidden) component of teachers' interaction with students and its effects on the affective attitudes of learning, the authors used the views of some leading scholars and researchers in the field of educational psychology and learning, especially Jean Piaget's theory of cognitive processes, Bronfenbrenner's ecological theory, Erickson's developmental theory, Maslow's motivational theory, and Bloom's books. The researchers in public high schools (with codes 1, 2, 3) witnessed non-constructive and biased teachers' interactions with students. In these high schools, the researchers witnessed the apparent discrimination of teachers in their interactions with students so that they had the most constructive and positive attention and interactions with smart students. On the other hand, they paid less attention to weak students, which had a harmful and destructive aspect. The researchers often observed some teachers entering the classroom without greeting the students and leaving immediately after teaching without saying goodbye. Creating a vapid and despotic atmosphere in the classroom along with a despotic face and tangled frowns to control the class and the use of methods of intimidation, insults, humiliation, and threats of students to study all indicated that some teachers were unfamiliar with the basic principles of educational psychology, teaching, and counseling techniques. The researchers in public high schools (with codes 1, 2, 3) found the unfortunate fact that some teachers are not familiar enough with the mental illnesses of students. Some students had attention deficit hyperactivity disorder, which the authors observed in the classroom. Excessive expectations from such students and ignoring their gradual progress was among the communication

Table 5. Statistical description of the scores of the affective attitudes of learning in public, private, and gifted (SAMPAD) high schools

Statistical Index	Mean±SD		
	Public	Private	Gifted (SAMPAD)
Students' attitudes toward textbooks	51.33±14.190	57.66±15.414	67.54±16.901
Students' attitudes toward school	56.78±15.971	68.84±16.121	78.25±16.164
Students' academic self-concept	53.37±14.273	67.83±14.636	75.56±16.139

barriers in the formation of teachers' positive interaction with students. Such interactions cause students' negative emotional attitudes and discouragement about teaching subjects, school, and academic self-concept, which is contrary to the recommendations and views of behavioral psychologists and motivational approaches. Although the researchers in public high schools (with codes 1, 2, 3) were faced with negative interactions between teachers and students in classrooms, in exceptional talents (SAMPAD) and Hormozgan University's high school (with codes 6, 7), they witnessed a different form of constructive and positive interactions between teachers and students. The creation of a favorable educational environment by the school authorities had led to mutual communication between teachers and students, which had a scientific, friendly, and supportive structure. Using Piaget, Vygotsky, and learner-centered educational approaches, teachers made it possible for students to participate in classroom discussions and foster positive academic self-concept in them. In these high schools, along with the theories of Thorndike and Skinner, there was mutual respect and affection in the reciprocal relationships between teachers and students. Teachers developed a sense of competence, adequacy, and skill, a passion for learning, and experience in students.

To analyze the qualitative findings of teaching methods and teachers' evaluation methods in the formation of the hidden curriculum and its impacts on students' affective attitudes, the researcher has used the views of the most influential curriculum planning scholars and experts, especially Eisner's books. The researcher observed that in many high schools and classrooms, teachers still used traditional teaching methods, such as lecturing and memorization, which deprive students of the opportunity to participate in class discussions and express their views, opinions, and feelings. In the meantime, the researcher encountered a literature teacher at gifted (SAMPAD) high school (with code 7). This teacher used learner-centered methods and group discussion in the classroom, which led students to exchange ideas through dialogue and solving problems.

4. Discussion

The study aimed to investigate the effects of the hidden curriculum components on the affective attitudes of learning in public, private, and exceptional talents (SAMPAD) high schools. Affective learning attitudes included the students' attitudes toward the subjects, textbooks, school, and academic self-concept. All fitness indices found via structural equation modeling indicated acceptable goodness of fit in the model. This research was conducted in two phases: quantitative and qualitative. Results showed that the independent variable (the hidden curriculum components) is significantly and positively correlated to all three dependent variables (students' affective attitudes toward subjects, textbooks, school, and academic self-concept). Overall, students' attitudes toward subjects, textbooks, school, and academic self-concept were positive. To compare the differences between the scores of the hidden curriculum components in different high schools, the quantitative findings showed that the mean scores of most components in exceptional talents (SAMPAD) high school are significantly higher than the mean scores in public and private high schools ($P<0.05$).

Based on the results, the hidden curriculum has a positive and significant relationship with the affective attitudes of students toward learning. Based on the qualitative findings, the textbook content directly and significantly correlates with the affective attitudes of students toward learning. In public high schools (code 1, 3), where students showed less interest in the textbook's content, the researchers observed their negative attitudes toward the subjects and textbooks. In exceptional talents (SAMPAD) and Hormozgan University high schools (private), students' attitudes towards the textbooks content were positive. Given the significant relationship between "the hidden curriculum" and "affective attitudes of students toward learning" in the present study, the results were consistent with the findings of Kian et al. [17], Abbaspour et al. [18], Samiee Zafarghandi [22], Clinton and Khan [28], Thornberg [29], and Ludwig et al. [30]. According to the research of Ludwig et al., affective engagement with the content is more effective than other learning techniques, and student's academic performance and achievement increase when they are interested in the curriculum [30].

In explaining these findings, it can be said that by completing many aspects of the educational identities of students, the hidden curriculum can provide rich educational opportunities and contexts for them to promote their affective attitude in learning. The qualitative findings showed that teachers' teaching methods in many high schools were unsatisfactory. According to the analysis, teachers' teaching and evaluation methods in the exceptional talents (SAMPAD) high school (code 7) were more desirable than all schools, and in the public high school (code 2) was weaker. In most schools, the researchers observed the traditional teaching methods, memorization, and repetition of the curriculum. They did not use the teaching and evaluation methods proposed by theorists in educational psychology and learning in

academic situations. The study results were consistent with Abbaspour et al. [18], Fallah et al. [21], Amini et al. [23], Abroampa [24], Cubukca [25], Van Den, et al. [31], and Mulder et al. [32]. Van Den et al. argued that a better teaching method not only leads to more learning and academic achievement but also develops a more positive attitude towards subjects, textbooks, and schools, thereby increasing students' academic self-concept [31].

Therefore, the hidden curriculum has a significant effect on students' behavior, progress, productivity, and performance in a constructive way, as well as its destruction for itself. Different social, cultural, and educational school experiences affect students, and they develop other relationships to authority, business process, physical and symbolic capital. Social and cultural activities, leisure time and sports activities, ceremonies for the celebration of specific days and weeks, social clubs are essential tools for hidden curriculum in schools, and they are considered successful to the extent of linking formal and informal aspects of the school, and lasting learning experiences can be created [25]. Values in the society focusing on raising good citizens should play a role in bringing the schools more effective. Social events, lectures at the school except in accordance with the objectives of education, according to students' interests and needs, personalities, information, and improve school management under the teacher's guidance in a planned, scheduled, and regular work is defined.

5. Conclusion

Overall, the findings of this study confirmed the effectiveness of the hidden curriculum components on students' affective attitudes toward the content and organization of high school textbooks and the teachers' methods of teaching and evaluation, as well as the significant correlation between them. Therefore, we can find solutions to reduce adverse effects and design curricula with more desirable quality. According to the findings, the factors involved in developing the hidden curriculum in teaching methods and evaluation of teachers with destructive and anti-educational effects are the outdated knowledge of teachers due to having multiple jobs. This condition creates a lack of motivation to keep in touch with students. Teachers consider students as knowledge-learners instead of knowledge-seekers. Teachers are influenced by this dominant mentality and emotional view that they can solve the students' problems by granting good marks. Therefore, it is suggested to help teachers not to think of themselves as mere transmitters of knowledge and textbooks content by adopting various methods to change attitudes and improve the level of knowledge and skills of their profession. Instead, they should be reminded that they play a more inclusive role as facilitators and guides, meeting the needs of the audience and students. Research findings on the content and organization of the textbooks showed that outdated content, its inconsistency with students' real needs, and the lack of a horizontal or vertical connection between content and subject matters are the main issues and concerns unresolved. It is suggested that education administrators and educational planners consider the practical components of the hidden curriculum identified in this study and introduce the hidden curriculum concept by conducting in-service training courses for teachers and school staff. To reduce the negative consequences of the hidden curriculum, school administrators should consider students' psychological characteristics, individual differences, and their psychological needs in the design of curricula. At the sociological level, parents should be encouraged to actively participate in their children's education to strengthen an effective relationship between them and the school. Parent presence as a partner at school will help their children develop positive cognitive and emotional attitudes, leading to increased academic achievement, and consequently, reduced destructive impacts of the hidden curriculum. This research is considered important from two aspects: theoretical and practical foundations. In terms of theoretical foundations, the proposed model was adopted from the theories of learning, management, and curriculum design and planning. Scrutinizing the results of this research can serve as an educational tool for those involved in education. In this way, they will know the desired and approved goals of the education system can be achieved only by modifying the curriculum.

The researchers were meticulous in conducting the present study. However, some factors may have been out of the researchers' control which has caused some limitations in the research. The results of this study are limited to the male high school students, and it is neither appropriate nor recommended to generalize the results to the students of other levels, such as primary or guidance schools and the second limitation is the geographical diversity of the participants, so the findings and the results should be generalized.

Ethical Considerations

Compliance with ethical guidelines

The current research was approved by Iran Doc License (Code No. 1538393). Written informed consent was obtained from the participants.

Funding

The paper was extracted from the PhD. dissertation of the first author at the Department of Educational Sciences, Faculty of Humanities, University of Hormozgan, Bandar Abbas.

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Writing the original draft: Yaghoob Raissi Ahvan; Supervision: Ali Akbar Shaykhei Fini; Conceptualization, methodology, investigation, resources, writing, review, and editing: All authors.

Conflict of interest

The authors declared no conflict of interest.

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