



## HOLLESTIC APPROACH TO HIDDEN ASPECTS OF THE CURRICULUM IN VIRTUAL EDUCATION: A MIXED-METHOD STUDY

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### ABSTRACT

**Background:** The hidden curriculum can be considers the social aspects and activities of the hidden curriculum, communication atmosphere of the learning environment.

**Objectives:** The aim of the present study is to evaluate the aspects of the hidden curriculum of virtual education in the form of a qualitative and quantitative study.

**Materials and Methods:** This study is a mixed study (quantitative-qualitative) that in the quantitative part all graduate students of virtual medical education were studied using census sampling. The questionnaire was sent to 150 entries of 2011 to 2014 via e-mail and 74 filled ones finally returned. Researcher-made questionnaire on hidden curriculum was used. The two-part questionnaire consisted of demographic information and the second part included 39 closed-ended questions by the 5-point Likert scale in the form of 6 components (teaching method, evaluation method, interaction between faculty and students, educational environment, laws and regulations and critical thinking) was used.

In the qualitative part, sampling was done through the semi structured targeted interview and continued until data saturation. The number of samples in the qualitative part was 15 master students of virtual education postgraduate students. Data were analyzed using conventional content analysis.

**Results:** The results of the qualitative study showed that the components of the evaluation procedures, rules and regulations, and critical thinking were desirable 3.11, 3.21 and 3.25 respectively. The results of the qualitative part result in the extraction of 177 codes in 5 themes that include educational environment, self-reliance, inefficient evaluation, interactions and superficial education. Each of the areas has multiple sub themes.

**Conclusions:** hidden dimensions of the curriculum in virtual training have numerous positive and negative features. So, it needs more attention by the policymakers of education to improve this dimension of the curriculum.

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### Introduction

The hidden curriculum consists of the cognitive, academic and educational outcomes on the one hand, and it affects the performance and educational progress of learners [1-4].

On the other hand, it considers the aspects and social functions of hidden curriculum, the communication atmosphere which is dominant on the educational environment and learning and the taught that they gained from daily interaction with other learners and management and educational staff. The curriculum is one of the most important tools to achieve the overall goals and policies of higher education and it should meet the current and future requirements and concerns of the community and play a constructive role in the resolution of issues and growth of the learners [5].

Since the mid-1970s and early 1980s, the curriculum specialists has done an attempt to systematize all the theories with the meta-theoretical attitude and they were successful to draw and present a system in this regard which included three overall categories of the official or explicit curriculum, the hidden or implicit curriculum and the sterile or absurd curriculum [6].

Saylor et al. (1980), defines the hidden curriculum as the difference between the designed curriculum and the experimented curriculum by the learners and mentions it as learning strategies see to solve the obstacle of the official or designed curriculum [7].

Hidden curriculum in higher education has multiple layers and various aspects that started from the formal and written requirements of a university (Official Curriculum) and continues until the norms of scientific disciplines as well as the unwritten ideas and beliefs about a good student [8]. Dekle believes that the hidden curriculum includes knowledge, beliefs, attitudes, behaviors and laws that students internalize them deliberately and non-deliberately [9].

Ahola believes that the curriculum in higher education has more freedom than the school curriculum and not developing this curriculum completely causes the stronger role of hidden curriculum in higher education [10].

Glicken thinks that there is a fundamental distinction between the things that are taught to students in educational environments and what they have learned that represents the hidden curriculum and involves learning at the level of interaction between individuals [11]. Indeed, what students hear in the classroom does not have the lasting impact, but their everyday experiences of teachers, assistants and other students affect their attitude and understanding of the future career [12].

Ausbrooks has summed up the best form of hidden curriculum of higher education in the nourishment of intellectual curiosity and emotional that provides the opportunities to explore new interests and developing new capabilities. In contrast and in the worst form, the hidden curriculum could weaken the critical thinking and sending implicit messages about the rational and logical follow-ups [13].

E-learning (virtual learning) which is considered a new method in education is applied to all new ways of teaching and learning that are supported through technology [14] and covers a wide range of definitions which all of them agree on the increasing access to resources, flexibility to the learner and developing the skills [15].

Ahula [10] was divided the general concept of the hidden curriculum into four main aspects, as follows:

- Learn how to learn
- Professional Learning
- Learn the expertise
- Learn how to play

Each of these cases is applicable for distance education as well.

So, the distance learning creates technological barriers (and consequently the acquisition of new skills) at the first place, which can properly be described as part of the hidden curriculum [16].

Secondly, students must learn their careers that include specific ways of thinking and different functions of a profession. Bergenheneguouwen [17] considered the dimension of learning the professions in hidden curriculum as a relatively delicate and essential aspect of job training.

The third point is learning how to be an expert. This dimension of the hidden curriculum refers to the acquisition of skills and specialized practices that shows expertise which is related to the profession or discipline in a different way. Bergenheneguouwen pessimistically defines this aspect of the hidden curriculum as a university bluff or learning to work as an expert (even in the absence of real specialty) [17].

The fourth dimension of hidden curriculum is related to learn the rules of the game that is necessary for survival in the social environment of the university [10].

In a general division, the results and effects of the hidden curriculum can be discussed in three dimensions: cognitive, social, and physical. In other words, the hidden curriculum involves the cognitive, academic and educational effects and affects the performance and educational and training progress of the learners on the one hand [1-4]. On the other hand, the social dimensions and functions of hidden curriculum, considers the communication atmosphere of the educational and learning environment and the taught that learners learn through everyday interactions with other students and management and educational staff [17-19]. In addition to the two dimensions above, the tangible and physical aspects of hidden curriculum is also related to the appearance of learning environments, design and construction of classrooms and hallways, lighting, visual features and the layout of tables, chairs and other training and educational equipment and the impact of them on learners [2, 13, 20, 21].

Lempp and Seale have researched the hidden curriculum content and exposure of medical students with qualitative methods. He conducted semi-structured interviews with 36 medical students of different academic years in a medical school in the UK. Four main themes were obtained in this qualitative study that consisted of individual encouraging, incidental teaching, the importance of hierarchy and improvement through the competition. [22].

According to what we presented about the hidden curriculum and its aspects and dimensions, this study aims to evaluate the program and its constituent elements and components among students of distance education of Shiraz University of Medical Sciences. It is intended to provide grounds for more attention to some aspects of teaching and learning through the creation of knowledge and insight about the performance of this type of curriculum at the University which are often ignored in the University's official policies and approaches.

## Method

This study is a mixed study (quantitative - qualitative). In the quantitative part of the study, all graduate students of virtual medical education were studied by the census method. The questionnaire was sent for 150 entries of the 2011 to 2014 academic years via e-mail; due to not receiving any responses, a phone call was made to all of them one by one and the emails were sent again. Finally, we received 74 responses.

In the qualitative section the sampling was done through structured interviews in which data were collected until the saturation. The number of samples in the qualitative section was 15.

In order to data collection in quantitative section, researcher-made questionnaires of the hidden curriculum were used (attached). The questionnaire consisted of two parts: the first part was demographic and contextual information and the second part contains 39 closed-ended questions by 5-point Likert scale (very high means "appropriate" and very low stand for "inappropriate") in the form of 6 components (teaching method, evaluation method, interaction between faculty and students, educational environment, rules and regulations and critical thinking); the questions were designed in conjunction with each component. The component of teaching method evaluates the students' attitudes on how teachers teach at online classes and the amount of involving the students. The component of evaluation method investigates the students' attitudes about assessing methods used by professors, including an emphasis on the final score, examination of student learning through the evaluation and providing feedbacks. Component of interaction between faculty and students evaluates students' perceptions about professors' relationships with each other and with students and ethical and training factors. Component of learning environment studies the students' viewpoint in the field of education management system and learning content and the overall atmosphere of online classes. Component of rules and regulations examines the amount of attention to the needs and expectations of the students in developing the rules of the classes and university. Finally, critical thinking emphasizes the amount of attention and acceptance of the criticism element in the classroom and campus.

To confirm the validity of the questionnaire, the views of 8 teachers and faculty members who are familiar with medical education, were considered. The questionnaire was valid in terms of content validity index (CVI=0.89) and content validity ratio (CVR=0.85).

The retest questionnaire method was used to determine the external reliability. The questionnaire was completed by 10 students in two stages (in an interval of one week) and the results showed that the correlation coefficient was ( $R=0.71$ ). Also, the Cronbach's alpha was used to determine the internal reliability of the questions. The result of the correlation coefficient is ( $R=0.76$ ).

Finally, after data collection, data analysis was done using descriptive statistical indicators such as mean-standard deviation – present and statistical tests of independent T-test and paired-T test with the usage of spss software version 21 in significant level of 0.05.

In the qualitative part of study, using a target-based sampling on virtual students through structured individual interviews with a general guide and field notes continued until data saturation.

In this study, information gathering was done via free interviews. The students were selected according to their interest in participation in the interview, motivation and cooperation with researcher. To do the interviews, after making sure on confidentiality of the interviews and ethical points, some explanations were given about the hidden curriculum at the beginning so that students become familiar with this concept.

The main question content was in this way that participants were asked what brings to their minds when somebody is talking about the hidden curriculum. Then, different aspects of the program were asked and their experiences in the field were reviewed in line with the interview continuation and entering to the depth of the research. By entering any of the sections, such as effective factors in three areas of the results, process and field, the depth of the subject was investigated and we entered the depth of the subject with expressed experiences and all its aspects were examined. The interviews were recorded. After each interview, all the talk were written on paper completely and after removing extra content, the main and relevant content to the subject were coded separately. Then, the content analysis was performed based on their views.

The qualitative method of content analysis was used in content analysis. In this method, the codes and classes were extracted directly and inductively from the raw data through the systematic process of classification. The key concepts and hidden patterns were extracted from the data content and data collection and analysis were done simultaneously [23, 24].

According to steps in the process of content analysis, each interview was read carefully several times to gain a basic understanding at the beginning and the important points were underlined.

Then, the semantic units of the interviews content in the participants' understanding of the hidden curriculum have been determined. In the next step, the semantic units were tagged by some codes through summarizing and more abstracting. Participants' words and implicit codes were used for coding. The codes were compared regarding similarities and differences and were classified several categories and subcategories [23, 25].

Some strategies such as re-controlling participants and the projects cooperators were used in order to validation. To assess the participants' re-controlling, in addition to restoring speech and experiences of collaborators, the full text of the codes and the classes was given to five of teachers who were familiar with the qualitative research and their comments were used in the reform or confirmation. To do the balance-assessment, the full text of the survey along with codes and classes were presented to two research faculty members and the opinions of two experts in qualitative research were used, too.

After reviewing the presented comments and documents, two project collaborators studied the expressed content separately at the beginning. Then, along with matching them to each other, the categories and subcategories were identified from the content and all the resulted materials were analyzed. To increase the reliability of the method, the participants' improvement was also used and the conclusion was presented after final wrap-up.

Data analysis technique was the conventional content analysis and the following items were examined in this method to have a careful analysis of the data

#### **Results:**

The results of the quantitative part showed that among the hidden curriculum components (teaching method, evaluation method, interaction between faculty and students, educational environment, rules and regulations, critical thinking) in Shiraz University of Medical Sciences, the components of evaluation method, rules and regulations, critical thinking is desirable according to the obtained means.

And components of teaching methods, interaction between faculty and students, and educational environment are less than the favorable level and totally, the status of hidden curriculum is desirable at the level of 3.01.(Table1& Figure1 cite here )

Table 2 shows that the difference between students' attitudes in different academic years is only in learning environment component (p-value<0.5). There is no significant difference in the other components (p-value>0.05).(Table2 cite here )

Table 3 shows that the students' age does not have effect on the hidden curriculum components (p-value>0.05).(Table 3 cite here )

Based on table 4, more female students believe that the hidden curriculum of Shiraz University of Medical Sciences is in a relatively favorable situation than male students, but this difference was not statistically significant (p-value>0.05).(Table 4 cite here )

In order to check the status of the hidden curriculum in distance education and its impact on students, in addition to the quantitative analysis and investigating relevant variables, the qualitative analysis of results were done. 177 common codes resulted from coding the qualitative content analysis of data from students' viewpoints, which were in the five areas including: educational space, self-reliance, inefficient evaluation, interactions and superficial education.(Table 5 cite here ).

Each of the themes has some sub-themes that include the following items:

The scope of the educational environment was divided into the sub themes of a) lack of accountability, b) the teachers' skills and c) expectations contrast.

Lack of accountability in learning environment from the students' viewpoint defines as the lack of cooperation among students, lack of professors' cooperation, weak accountability, and poor system of software of presenting courses and so on.

A student who entered at 2013 academic year said: "Online classes were not that fruitful, they were awful, there were not enough infrastructure, downloading the classes was a disaster."

Faculty members' skills in teaching space considers as efficiency of presented training, teachers' support towards the students in learning, and using a variety of teaching methods and strategies in terms of students that can strengthen the role of motivation and effective learning. A university professor has the identity and role of a teacher at the university, but his identity out of the university is a specialist in a topic or a series of subjects. With the increase in students' absorption at universities, the curriculum requires more changes and the professors are expected to be creative planners, subsequently. In addition, in order to attract external funding in the competitive research culture, the professors are expected to be skilled researchers.

A freshmen student of 2011 said: "The relationship was one-sided more than two-sided at online classes, so it was not that interesting. However, it was different from a professor to another. I mean that some professors were much better in the virtual space, they asked questions of the students, they were not the only person who talks, they were able to run the space and quality of the virtual class the same as the real classes and this was very impressive."

Expectations contrast in terms of the students is a sense of worthlessness, creating the pessimistic attitude in students and the uncertain future of the field. A freshman student of 2011 said: "A big problem is that there is no future for the field, the field is not known anywhere. My frustration is that if I get a college degree, I do not have any promotion in terms of employment and work. No one knows this field at my office and there is no positive energy to continue education".

Self-reliance scope was divided to the three following sub-areas: a) self-organization, b) self-leadership, c) technology literacy. The self-organization of the students view considers to be the self-reliance in doing homework, self-centeredness, self-motivation, spontaneity, strengthening self-confidence, suitable methods for employees' education, mind flourishing, and self-made students. Regarding this issue, an entry student of 2011 said: "Although some courses require class attendance, in general it increases people's confidence as you can start learning without others."

In the students' attitude, the self-leadership means self-reliance and persistence in learning, self-confidence, identify the way of learning knowledge and learning through various methods.

A student entered the university at 2013 said: "I realized that I could be my own scientific reference for my scientific requirements. I only need a guide to show me the direction and I go forward in that. I found that very little knowledge is taught in our universities. I concluded that in the field of biochemistry in public university, they drowned us in a pool full of biochemistry. An interesting event in medical education was that they taught us how to swim; we can swim at any field. It covers all the fields and this goes back to the hidden curriculum of medical education that changes us to scientists who know the address of knowledge; and it is useful in our professions."

The technological knowledge in students experience include learning computer and language for online classes, working with Internet skills, proficiency in English in online classes and computer skills.

A freshman student of 2013 expressed: "If someone does not know how to work with computer, there is no one to teach them and the students must learn themselves. So, as we need to follow some capabilities such as English and computer, we try to learn."

Another student said: "as we worked with the Internet for online classes, we were required to be updated and have more information about the Internet. Therefore, my knowledge of the internet increased."

Insufficient evaluation classified in three sub-themes : a) superficial monitoring, b) injustice in the evaluation and C) superficial feedbacks.

Superficial monitoring in the experience of students includes some factors such as put emphasis on evaluation of online classes, poor performance of the assignments, traditional evaluation, not up-to-dated evaluation, incorrect division of evaluation questions between professors and poor monitoring on the evaluation methods.

A freshman student of 2013 said: "The traditional method of evaluation still has its domination on the electronic system which is new; and this somehow imposes the same opportunities, weaknesses, and the aspects of traditional system in e-learning system."

Another student indicated: "the booklets were voluminous and time-consuming, but most of the exam questions were from online classes. Offline courses were too time consuming, but I felt that the online courses were more important to them."

Injustice in the evaluation includes non-standard evaluation of education that in students experience consists of some factors such as the lack of enough protection of meetings, discrimination between students, unhealthy evaluation and not designing new questions for the exams.

An entry student of 2011 said: "I saw lots of things which made me sad at exam sessions. Some people were easily cheating. The negative point was that there was not the sufficient system on the masters' exam sessions which could reduce the prestige of the field. It was obvious so that all the people understood it."

The superficial feedback involved the codes of not-monitoring the learning, not-importance of the evaluation, lack of successive evaluation, and the impact of evaluation method on learning.

An entry student of 2011 mentioned: "We are not involved in the field and we did not understand the field practically. The teachers did not give us any feedback of the practical work and we do not know if we've done our homework properly or not?"

Interactions were categorized in the two sub-areas: a) role models, b) interpersonal interactions.

Role models are including the role of education, training and teachers' personality on students which can positively or negatively impact students and can be used as a model in the students' careers.

A 2011 freshman student said: "the interaction with the professors, I mean talking to them was very comfortable. They accepted us very soon. I found out that when someone comes from a place and is not familiar with the environment, the warm welcome profoundly affects them. We were like the professors' clients and we have learned to behave our clients that way. "

The 2013 entered student said: "I learned different training methods from professors that now we can use these methods in our professions and I think that these sessions are so efficient."

Intrapersonal interactions include the attention and interaction between faculty members and students and the efficiency of the communications in the learning environment. Also, it includes students' interactions in virtual and non-virtual spaces.

A 2013 freshman student said: "I could not communicate with classmates in this course; you cannot count on the students' relationship in virtual educational system."

A 2011 freshman student said: "although we have rarely seen each other, very good friendship relations were formed. Indeed, if we were the student of presence classes, the relations were more; but there was a healthy competition between the students even now and we helped each other by phone calls and through chats in tasks. There were some students I was in contact with by phone or via chat, in the last term we met each other and a good relationship started among the students."

Superficial education was divided to three sub-areas: a) depth of learning with, b) educational resources and c) access.

The expressed depth of learning in students' experience includes the superficial learning of the content, superficial understanding of the materials and not applicability of some courses' content. This combined with lack of emphasis on practical courses and theoretical method of teaching leads to low efficiency of theoretical education, not applicable training and lack of practical education and lack of attention to the students' scientific level.

A freshman student of 2013 said: "The problem of virtual education was limited online classes and lack of understanding of some offline topics and teachers do not understand whether students understood the material or not?"

Another student said: "I have spent two semesters, and lots of Medical Education topics are vague for me. I even still do not know what I should choose for my thesis and what I should do while this is all my concerns."

Educational resources consist of some items such as inadequate educational resources, insufficient content, lack of resources, and lack of updated materials for new entries.

An entry of 2011 said: "the booklets were enough if we studied just for passing the final exams, but the teachers should introduce us more books in case they wanted us to have more knowledge. Then, they mentioned the books as the exam sources so that we must study them at least for the score. "

Access includes the problem of access to professors and reduction in the incentive caused by access environment.

A 2011 freshman said: "I feel that the educational atmosphere was not enough provocative for those who had low motivation. However, I was not impressed by the environment and I relied on myself."

Another student said: "it was very hard to communicate with professors. I sent more than thirty emails to one of the professors and I have received no answers."

#### **Discussion:**

The official curriculum is what official planners and designers do in order to improving the education and development of the students in higher education system. However, the total learning of students is not limited to the formal curriculum and some other learning factors influence the thinking and behavior of students which are not a part of the official curriculum and they are hidden from the view of the higher education system planners and operators. These items impact is more important than the curriculum [26]. In this study, six components of the hidden curriculum in higher education are taken into account (teaching methods, evaluation methods, interaction between faculty and students, educational environment, laws and regulations, critical thinking).

From the hidden curriculum components (teaching methods, evaluation methods, interaction between faculty and students, educational environment, laws and regulations, critical thinking) in Shiraz University of Medical Sciences, based on the derived averages, components of the evaluation methods, rules and regulations, and critical thinking were at the favorable level; And the components of teaching methods, interaction between faculty and students, and educational environment are below the standard level. Totally, the status of the hidden curriculum was higher than the standard level to the amount of 3.01. This findings are consistent with the results of the study of Taghvai Yazdli et al. [27] and the research of Mohammadi Mehr and Fathi Varjagah [28], but it is inconsistent with the results of similar studies conducted by Bayanfar et al. [29] who believes in huge negative effects of the hidden curriculum.

The results showed a difference among the attitude of students who entered the university in different years only in learning environments ( $p\text{-value}>0.05$ ). There is no significant difference in the other components ( $p\text{-value}<0.05$ ). The experts such as Margolis [2], Dixie [30], Weber [31] and Ferriter [32] agreed on the influence of educational environmental on forming the hidden curriculum.

The results showed no significant difference between male and female students' perspective ( $p\text{-value}>0.05$ ). This means that the hidden curriculum has the same impact on all students, male and female. Basically, sex cannot cause a significant difference between the views of the individuals about the effects of the hidden curriculum. This finding is consistent with the results of Amini et al [26] and Faraji and Bagher Panahi [33], Taghvai Yazdli et al [27] and Amini and Tamanaeefar [34] researches. They concluded that there was no significant difference between the viewpoints of male and female students.

The results of the qualitative part showed that factors such as teaching space, self-reliance, poor evaluation, interaction, and superficial education are effective on the hidden curriculum. The importance of the hidden curriculum and its impact on the growth and improvement of students has been examined in several studies [35-38]. This study showed that the intrapersonal interactions between teachers, students and the teaching staff are important and valuable tips that can be seen in the experiences of students from the curriculum.

Different experts agreed on the effect of interactions and relationships in classrooms in the formation of the hidden curriculum (including [13, 39-44]).

The results of a research by Mosalanejad et al. that led to the exploration of the students' experiences in the field of hidden curriculum revealed that the interaction between the professors and the moral viewpoints of them are nested in students as one of the important aspects of the hidden curriculum [45].

In a study by Kadivar that explores the moral development of students and its relationship with the organizational atmosphere of the schools and the relationship between teachers and students, the way of the students' interaction and their relationship with the environment and teachers were recognized as a factor contributing to the moral development of students [46].

In the present study, the important role of teachers in installing the positive aspects of education as a model for how to treat students was mentioned. Then, it paid attention to the incorrect and contradictory behaviors of the teachers. A lot of researches confirmed this case and mentions the important role of teachers and the impact of its hidden dimensions and aspects. Marlow and his colleagues in their study indicate that the school principals as leaders and school culture-makers have the greatest impact on the hidden curriculum [47].

What's more, in this study, the effect of the small and weak interactions of faculty and students can be seen in the hidden curriculum. The findings of the research were in line with the study findings of Schweinle [48], Nuhrenborger and Steinbring [49], and Bayanfar [50]. In fact, the above mentioned researchers also concluded that the interaction in the educational environment is one of the important factors influencing the students' attitudes towards learning, university and their self-conceptual training.

As the virtual university is a type of absentia training course, the student is deprived of the benefits of participation in an academic environment. In fact, moral and spiritual transformation between student and teacher is not formed fully and this online communication cannot be considered equal with the forms of communication at the traditional universities in terms of practical patterns and spiritual relationships; as the nature and basis of these two issues are different. Anyway, this caused limitations in the field of education and learning from the cultural, moral and even social aspects of. The interesting point is

that this type of communication causes the professors suffering as well as the students. A professor who is accustomed to the traditional training may be coordinated even harder than the student with the environment of virtual class [51].

In this study, the role of educational resources mentioned in reducing or increasing students' learning. Some curriculum specialists agreed in the effect of the content of textbooks on the formation of the hidden curriculum [3, 42, 52, 53].

The results of this part of the research was consistent with the study results of Bergenhenegouwen [52], Shen M, Wang and Shen R [54], McLoughlin [55]. The researchers showed that when the content of textbooks are practical, and the students can use the content in their daily lives and to solve their problems, their interest of the content and thus their learning increases. The course content is one of the items that its mismatch with the real needs of students and the lack of its horizontal and vertical communication with other subjects, may reduce the interest of learners to follow and scientific exploration. Also, the appropriateness of its volume and being up to dated are considered as important points [56].

From the perspective of virtual students, the professors' skills in managing online classes, subjects and designing exams play an important role in the hidden curriculum. Adams believes that the role of teachers is very important in transferring a dominant cultural system, particularly in higher education; he knows them the source of everything, those who directly control teaching, assessment and curriculum [57]. Ahula refers to the teachers' role in the creation of characteristics such as self-control, perseverance, time management, ability to withstand stress and acceleration for life [10].

Cohen indicated the important role of teachers in the development of professional ethics and believes that today's educational environments have blurred the commitment to the medical values with playing the non-professional roles [58]. Rezvani also expresses the use of duplicate titles, in educational topics and lack of collectivity in introducing practical patterns in addition to teaching, as the hidden components of curriculum.

Sambl and McDowell in their research findings point out that the students give direction to their study methods and interact with scientific content based on the feedback that they take from the exams and assessment methods [59].

In this study, the traditional evaluation system and incorrect evaluation method, superficial monitoring and lack of feedback had a huge impact on the students' motivation to learn. Some experts like Jackson and McNeill agreed on the impact of teaching methods and teachers' evaluation on the formation of the curriculum [39, 60].

Brown knows the assessment methods and evaluation procedures as the factors that have huge impact on the nature of students' learning in comparison with any other factors, and this effect is even described more important than teaching materials [56]. This study showed that the virtual education in company with the official curriculum cause some impacts on the students such as self-reliance, self-regulation and self-direction that are considerable in the hidden curriculum. In the words of Murphy, as in preceding studies related to the hidden curriculum, more attention turns to the negative aspects, it seems that the subject of the hidden curriculum is something degrading and pejorative and it has a the dark, ambiguous and threatening image. So, the universities know the hidden curriculum as a passive stance, neutral and even deny its existence [61].

But as Masella said, there are many positive aspects in hidden curriculum that allow universities to act in a desired and productive way. In this regard, he emphasis that all academic curriculum planners should increasingly do effort in order to make the hidden curriculum in line with their educational goals and outcomes of the official curriculum; an effort that is equivalent to designing the official curriculum [62].

### Conclusions:

Due to the fact that the factors affecting the formation of the dimensions of a curriculum have a basic role in nesting the training aspects in students and citizenship education, it is recommend that teachers identify the main underlying factors contributing to the formation of the hidden curriculum and non-obvious factors in their instructional design. Considering these factors, they can act more rationally in designing and implementing education. What's more, the weaker the higher education system is, the more the hidden curriculum plays role. If the official planning system of higher education somehow reveals the hidden messages and supervise them, it can covers the hidden curriculum. The result is that the planers of the official curriculum of higher education should consider the items of the hidden curriculum as an educational black box and do not ignore its training effects.

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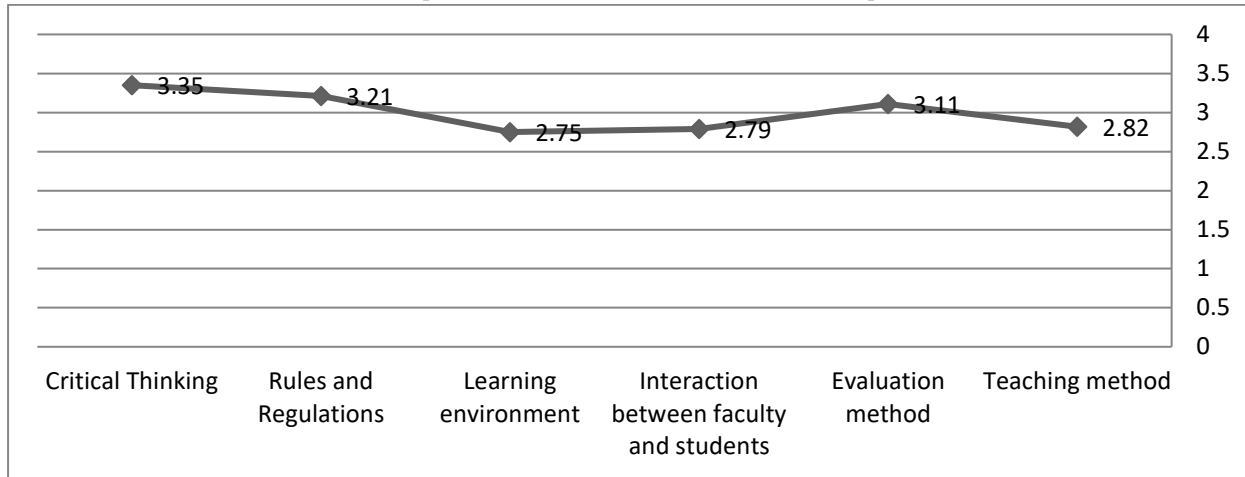
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**Table 1:** Comparison of the mean of hidden curriculum components based on assumed mean (3)

	Number	Mean	Standard deviation
teaching method	74	2.82	.65
Evaluation method	74	3.11	.68
Interaction between faculty and students	74	2.79	.64
Learning environment	72	2.75	.72
Rules and Regulations	74	3.21	.70
Critical Thinking	73	3.35	.78
Hidden Curriculum	74	3.01	.53

**Figure 1:** Comparison of the mean of hidden curriculum components



**Table 2:** Comparison of the mean of the hidden curriculum components in terms of entry years

Variable		Number	Mean	Standard deviation	F	Sig.
teaching method	2011	22	2.91	.79	1.68	.179
	2012	6	3.30	.54		
	2013	23	2.75	.50		
	2014	23	2.68	.66		
	Total	74	2.82	.65		
Evaluation method	2011	22	3.20	.66	1.97	.126
	2012	6	3.49	.45		
	2013	23	3.17	.69		
	2014	23	2.85	.67		
	Total	74	3.11	.68		
Interaction between faculty and students	2011	22	2.96	.76	.78	.505
	2012	6	2.85	.32		
	2013	23	2.71	.66		
	2014	23	2.70	.56		
	Total	74	2.79	.64		
Learning environment	2011	22	2.92	.78	3.30	.024
	2012	6	3.43	.81		
	2013	21	2.63	.64		
	2014	23	2.53	.61		
	Total	72	2.75	.72		
Rules and Regulations	2011	22	3.41	.50	1.56	.206
	2012	6	3.27	.40		
	2013	23	3.25	.74		
	2014	23	2.97	.83		
	Total	74	3.21	.70		

Critical Thinking	2011	22	3.54	.70	1.88	.140
	2012	6	3.61	.98		
	2013	23	3.41	.76		
	2014	22	3.04	.79		
	Total	73	3.35	.78		
Hidden Curriculum	2011	22	3.16	.51	2.45	.070
	2012	6	3.29	.45		
	2013	23	2.99	.53		
	2014	23	2.80	.50		
	Total	74	3.01	.53		

**Table 3:** Comparison of the hidden curriculum components based on age

Variable		N	Mean	Std. Deviation	F	Sig.
teaching method	27.00 - 32.00	19	2.83	.63	.191	.902
	33.00 - 38.00	28	2.83	.68		
	39.00 - 44.00	20	2.82	.70		
	45.00+	5	2.60	.56		
	Total	72	2.81	.65		
Evaluation method	27.00 - 32.00	19	3.03	.81	.340	.797
	33.00 - 38.00	28	3.20	.65		
	39.00 - 44.00	20	3.15	.63		
	45.00+	5	2.96	.53		
	Total	72	3.12	.67		
Interaction between faculty and students	27.00 - 32.00	19	2.74	.61	.809	.493
	33.00 - 38.00	28	2.83	.58		
	39.00 - 44.00	20	2.94	.69		
	45.00+	5	2.49	.56		
	Total	72	2.81	.62		
Learning environment	27.00 - 32.00	19	2.77	.71	.736	.534
	33.00 - 38.00	27	2.75	.70		
	39.00 - 44.00	19	2.86	.68		
	45.00+	5	2.32	1.14		
	Total	70	2.75	.72		
Rules and Regulations	27.00 - 32.00	19	3.17	.84	.620	.604
	33.00 - 38.00	28	3.30	.62		
	39.00 - 44.00	20	3.29	.51		
	45.00+	5	2.90	.51		
	Total	72	3.23	.65		
Critical Thinking	27.00 - 32.00	19	3.02	.82	2.498	.067
	33.00 - 38.00	28	3.48	.69		
	39.00 - 44.00	19	3.59	.82		
	45.00+	5	2.94	.76		
	Total	71	3.35	.79		
Hidden Curriculum	27.00 - 32.00	19	2.92	.59	1.204	.315
	33.00 - 38.00	28	3.07	.47		
	39.00 - 44.00	20	3.12	.49		
	45.00+	5	2.70	.58		
	Total	72	3.02	.52		

**Table 4:** Comparison of the hidden curriculum components based on gender

Variable	Number	Mean	Standard deviation	T	Sig.	
teaching method	Male	19	2.6737	.65051	-1.184	.240
	Female	55	2.8791	.65247	-1.186	.245
Evaluation method	Male	19	3.0947	.65133	-.120	.905
	Female	55	3.1167	.69702	-.124	.902
Interaction between faculty and students	Male	19	2.8071	.64413	.077	.939
	Female	55	2.7938	.65270	.077	.939
Learning environment	Male	18	2.7611	.68009	.028	.978
	Female	54	2.7556	.74963	.029	.977
Rules and Regulations	Male	19	3.2263	.61510	.063	.950
	Female	55	3.2145	.73229	.068	.946
Critical Thinking	Male	19	3.1805	.80650	-1.153	.253
	Female	54	3.4228	.78180	-1.136	.265
Hidden Curriculum	Male	19	2.9681	.55332	-.428	.670

	Female	55	3.0288	.52621	-.417	.679
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**Table 5:** The themes and sub themes of hidden curriculum

Themes	Sub themes	Items
Educational environment	a- Not being responsive b- Teachers' skill c- Expectations contrast	The unpleasant problem of online classes was one-side relationship than two-sided
Self-reliance	a- Self-organization b- Self-leadership c- Technological literacy	If we learn how to swim, we are able to swim at any areas
Insufficient evaluation	a- Superficial monitoring b- Injustice in evaluation c- Superficial feedback	They presented us no feedback of the assignments
interactions	a- Role models b- Interactions among individuals	We cannot rely on the students' relationships in virtual education
Superficial education	a- Depth of learning b- Educational resources c- availability	The problem of virtual education is limited online classes and not understanding some of the offline courses