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Devising virtual curriculum for the second period of high schools in Khaf

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Abstract

Present study aims at devising virtual school curriculum in the second period of high schools in Khaf. In terms of goals, research methodology is an applied one while in terms of data collection, it is a descriptive survey and it is a combination – type (qualitative – quantitative) exploratory study in terms of data type. Research population in its qualitative part consists of experts and connoisseurs including faculty membered instructors with syllabus doctoral and in quantitative part, it includes teachers, principals and scholars active in virtual space who were 260 in Khaf (Razavi Khorassan Province) high schools. Sample volume in qualitative part was determined as person by using objective nonrandom sampling and snowball techniques and theoretical saturation principle and in quantitative part, 125 people were assigned as sample by using Morgan table and simple sampling technique. In qualitative part, data collection tool was semi-structured interviews while it was structured questionnaire in quantitative part. To assure the validity of interviews, triangulation was used. Also, to assure the reliability of interviews, recodification and for validation, experts' opinions were utilized. To measure questionnaire validity, content and construct validity is used and the results show its validity. To measure interview reliability, Cronbach's alpha ratio is used; in qualitative section, data analysis is based on grounded and theory and content analysis. In quantitative section, factor and exploratory analyses are used. The findings indicate that the components of virtual curriculum in the second period of Khaf high schools include target, content, instructor and assessment.

Keywords: virtual school curriculum, target, content, instructor, assessment

Introduction

By the emergence of information and communication technology in global arena, training and education process in general and syllabus planning in particular have experienced changes. Not only ICT enhances basic skills such as reading, writing, computing and arguing but also it is capable to promote information literacy (Reddy & Bubonia, 2020).

Using virtual networks in training, education and research is rapidly growing. By over 2 billion users, Internet penetration coefficient is achieved to 33%. In this vein, Iran has attracted over 2% of Internet users' shares. Internet penetration coefficient of 53% indicates that there are over 40 million Internet users in Iran as the top rank in the Middle East in terms of users (Rezaei, 2017).

In recent decades, virtual training is evolved as a modern training method. Virtual training is rapidly introduced as a successful science learning technique in 21st century. Online teachers play different roles such as advising teacher, facilitating teacher, training deviser and website coordinator (Nasirova, et al, 2020).

Understanding training time and place of virtual management methods and involving students through virtual communications need to change thinking formats (Davise, 2007). It broadly shows transmission from traditional to virtual teacher which needs continuous resistance, scaffolding and monitoring (Narimani, et al, 2020).

Virtual training is to use remote communication technology to receive information with the aim of training and learning. As ICT advances, virtual training also emerges new paradigms of modern training. Of the most important benefits of virtual training, one can refer to the interactions between learners and trainers, or learners with learners through simultaneous and non-simultaneous learning network models (Yazdi and Zand Karimi, 2013).

Virtual training is known as a factors which facilitates learning process and develops students' achievement by using technology. Thus, virtual training is seen as too important for learners. This

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technology can improve learners' educational improvement and help them to achieve a part of standard training goals without any access to schools. UNESCO is highly interested in virtual training and allocated equipped systems to this section (Mamadua et al., 1, 2019).

Virtual training is expanded in a broad level of the society and training classes are organized online and remotely. Virtual learning milieu is usable in any time and any place and it would prevent wasting the time and costs of transportation since in today information world, time is highly important and one should acquire its needed information and knowledge in the shortest possible time. Virtual training emergence is new and within such short time, it has found a very proper stand in training systems and plays avital in educating the learners. Undoubtedly, in the case that affecting factors on such training technique are identified and met, the quality of monitoring and executing the training will not be reduced; rather, considering the broad administrative capabilities of such systems, one can make necessary arrangements in all training phases ideally and multilaterally. It would save annual training costs by which one can pave the way for more ideal growth, development and creativity of students (Jafary, 2014). Considering the importance of ICT and its significant role in virtual schools, devising a proper curriculum paradigm for such schools is too important and necessary. Many training institutes intend to expand advanced scientific infrastructures and foster students' growth and creativity rather that spending huge costs on constructing and maintaining training spaces which would remarkably save the costs.

Virtual training would develop training opportunities and would help students to extend their skills. The findings of longitudinal studies indicate that online learning can have deep positive impact on involving learners, teachers' positive insights, learning personification and students' creativity (Arkorful & Abaidoo, 1015).

In a school which is based on ICT, teacher's main role is a trainer and student is not just a learner. Thus, training content should particularly devised in accordance with the roles of teachers and students. Any student has his/her own learning method so that anyone can enjoy training content by his/her own capabilities (Shafipour Motlagh, 2011).

In virtual school, students play the roles of bother teacher and learner. In such school, curriculum is not restrictive and students are allowed to step forward their syllabuses. In this school. Instruction is student oriented. Emphasis on the skill of thinking and paving the way for teaching/learning, is a strategy and policy of smart school (Shafipour Motlagh, 2011). In official education, training in the framework of curriculum would yield to citizen's education. On this basis, training planning points out a process conceptually that its result is curriculum. Term curriculum means a field of competition and/or a distance which should be passed by people to achieve tier goals (Jafari and Karimi, 2017).

In recent years, many institutes throughout the world have changed their approach on curriculum and have paid more attention to its content (Barnett and Coate, 2005). In this vein, many efforts are made to identify main components and results. For instance, in Britain, according to approval by European Quality Guarantee Agency, identical pillars are determined for training throughout the country and its attention is more paid to learning results. Such priorities can create opportunities for synchronizing and improving curriculum in institutional or national levels. However, determining a comprehensive curriculum as plan is not simple even where it seems very favorable. Curriculum conceptualizing plan in current age as the age of combined learning is too complicated. Most teachings are online when they can be determined more than curriculum. In the age of information and free access to resources as well as mass media, curriculum should be inevitably expanded beyond what already planned. When curriculum term is used in higher education, it means a set of components (Pinar, 2016).

In fact, curriculum is one the most radical pillars in educational sciences and plays a vital role in students' performance. It also involves unofficial processes. It is a capacity with multiple functions which intends to cover all explicit, implicit and even operational training events in order to satisfy pedagogy expectations. Curriculum can be seen as a process which links start and end of learning and training flow (Grimus, 2020: 132).

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Curriculum term involves students' learning goals (skills, knowledge and insights), content (subject by which learning experience is conducted), sequence (a method in which concepts are provided), students, training methods and training initiatives, training resources (materials and adjustments), assessment (methods used to assess students' learning) and coordination between instruction and learning process based on experience and assessment (Dezure et al., 2002).

In any school, curriculum is the procurement of initiatives to act in educational processes. These initiatives make it clear that what is the purpose of educational act, how an educational act is occurred and how its effectiveness can be achieves. Doll believes that curriculum is an either official or unofficial process by which learner acquires knowledge by schools' supervision and finds their understanding way, learns skills an changes views, valuing and values (Sarmadi & Faramarzi, 2016).

Unfortunately, domestic virtual training lacks an admirable status in all educational degrees; however, the necessity of this issue became tangible for all due to COVID-19 pandemic in world and particularly in Iran. Thus, all schools are using the capacity of virtual networks instead of classrooms by their capability. Corona Virus changed people's training taste worldwide. In other words, it had the highest impact on training. In next semesters, many universities in advanced countries including Harvard would organize a half of classes virtually (Rose, 2020).

The status of virtual training in high schools especially the second cycle in Iran is not favorable. For instance, some teachers have negative attitude toward virtual training. They believe that existing challenges and deficits in current remote training trend have influenced on training quality negatively and report card glance without any backup on this process has caused that the current opportunity made by COVID-19 to exercise remote training converts to a training threat. Among the most important problems in this field, one can refer to lack of proper content or lack of any plan to produce content; there is no standard content for lessons and, radically, there is no plan in this regard. Likewise, many teachers and learners are not so interested in virtual training since a clear structure and cohesive plan is not formulated for parties. In the meantime, a problem is Internet and software infrastructure. Special and intelligent software is not prepared for this field; the relationship between teacher and students is through external apps and recently, Ministry of Education and Training was thinking of using “SHAD” application for schools upon being left behind and this application encountered colleagues and families with challenges because of its infrastructural problems while it is not s applicable. This training application is too slow with hierarchical and confusing structure to which many families are not familiar.

Concerning the scope of this study, Moosa Ramezani et al (2019) studied the impact of utilizing portable learning environment based training model on math learners’ social attendance in smart schools. The findings suggest that using this patterns is effective on all aspects of social attendance and instruction presence in experimental group compared to control one (in posttest). Likewise, Tarjoman et al (2019) indicated that studied community is prepared to establish virtual training in terms of both software and hardware infrastructures and it is not possible to establish virtual training in terms of specialized manpower in medium level and also in terms of cultural initiatives, financial and supporting resources and online content. Ultimately, considering the circumstances, it is not possible to establish online training in nomads and rural secondary schools at Lorestan province. Zarei Mohsen et al (2019) studied the issue of designing and validating the pattern of virtual social networks in Iranian schools. The aim of their study was to devise a pattern for virtual social networks in Iranian schools. It was implemented in combined qualitative and quantitative method and an exploratory plan. Research findings yielded to identify four main components: network learning, network facilitation, network management and network technology as well as sixteen subcomponents with high similarity with main components in terms of performance and meaning. Likewise, findings indicated that extracted patterns enjoys high internal validity. Butcher G. (2020) conducted a study titled the contribution in public and private online schools and resilience of a coalition government for schools during COVID-19. He concluded that Corona Virus has changed households’ daily life throughout the world. In the United States, one of the radical changes for million households is that most K-12 students are predicted as home-school pupils or virtual schools in for future. Since March, local and state officials closed some of traditional and online K-12 schools in each state for at least two weeks which impacted over 55m students. Cortez C.

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P. (2020) studied on combined learning, remote training and virtual learning for new and normal math students: high school senior students' perception. It examines high school senior students' conception on combined learning, remote training and virtual learning as a new technique to provide courses for next educational year due to Covid-19 threat. Research sample consists of 342 high school senior students from different fields at STI City Global College. Al data were collected by a structured questionnaire and were sent through Google to be adapted with government's current lockdown policies. The findings indicate that people's conception on the impact of online learning and their ability to attend in e-learning is independent from their lifestyle and their available e-learning tools. Despite of such analysis, variance result indicates that their mathematical perceived capabilities are remarkable different. In his study titled identifying challenges encountering planning for making Hamadan's nonprofit schools smart, study the situation of training in smart schools. The findings indicated that in the view of teachers at preliminary nonprofit schools, making schools smart is encountering with infrastructural and planning barriers. Also, the results suggested that, in terms of importance, barriers encountering making the schools smart are rated as planning, infrastructure and human force. Afkari et al (2019) conducted a study to design proper virtual curriculum in the first circle of secondary schools by using a mixed technique including two sections: qualitative by using related resources study and quantitative and descriptive (questionnaire). The findings indicated that virtual syllabuses of basic sciences at Grade 9 contains such elements as goals, content, learning and teaching activities and appraisal techniques provided by considering the results of conceptual model. Cavanaugh et al (2019) achieved contemplatable development in their study titled developing teachers and designing skill courses for naïve teacher in Australian virtual schools. Their findings indicated that in all teaching self-report skill standards, teachers have grown online and referees have evaluated two third of 21 cases as satisfied and very satisfied in terms of quality of most courses by starting teaching by teachers to students. Jonas A. (November 2019) studied virtual schools in the age of link and inequality and analyzed the experiences of stakeholders in US K-12 virtual schools by using important critical demographical techniques and their association with marginalization patterns in education and labor systems and by admiring schools as important welfare channels, the harbor of society's growth and cohesion and places with long terms institutional violence, they believe that schools digitalization may pave the way for the escape of some social infrastructural damages. Scholars do not concur on the number of curriculum elements. In present study, curriculum elements are taken into account which should be considered in both ordinary and smart schools (Zentall, 2015). Considering above points and occurred conditions and most people's mindset, present study attempt to design virtual school curriculum in the second circle of Khaf (Razavi Khorasan Province) high schools.

1. Methodology

Considering the fact that research subject is design virtual school curriculum in the second circle of Khaf (Razavi Khorasan Province) high schools, research methodology is an applied one while in terms of data collection, it is a descriptive survey and it is a combination – type (qualitative – quantitative) exploratory study in terms of data type

Research population, sample size and sampling method

Research population in its qualitative part consists of (a) phishing documents, books, papers, Internet resources, theses, studied journals, specialized articles and texts; and (b) experts and connoisseurs who were interviewed till data theoretical saturation. Experts and connoisseurs included faculty member instructors with syllabus doctoral. Sample size in qualitative section was selected by objective and snowball techniques. In quantitative part, research population included teachers, principals and scholars active in virtual space who were 260 in Khaf (Razavi Khorassan Province) high schools. In this section, sample size was probably selected. Since sample size was clear and based on payroll, 260 including 143 men and 117 women were selected by using Morgan – Krejcie Table. Since the names of respondents are available, simple random sampling method was utilized.

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Data collection tool

In qualitative part, data collection tool was semi-structured interviews in which interviews were conducted to answer the question on identifying research main components and indicators. Data collection tool was structured questionnaire in quantitative part conducted by reviewing scientific and theoretical foundations as well as exploratory interviews (through open codifying exploratory interview texts)

Research tools validity and reliability

Validity: to determine the validity of interviews, content validity was initially used. Hence, devised questionnaire was submitted to experts and connoisseurs and their opinions were used for better validity and modifications. In addition to content validity, construct validity was also used to determine the validity of the questionnaire. To this end, the results from exploratory factor analysis were used which showed its construct validity.

Reliability: in present study, retest reliability and intra-subject agreement methods are used to compute the reliability of conducted interviews. To compute retest reliability, several interviews were selected as sample and each one was codified two times in short and certain intervals. Then, relevant codes were compared for each interview in two intervals and the findings proved proper retest reliability. To compute interview reliability by Inter coder reliability (ICR), an instructor familiar with codifying was asked to contribute as secondary coder. Then, author along with this research colleague codified three interviews and computed the percentage of inter – subject agreement used as a reliability analysis index. ICR was achieved 8.82 which indicates its appropriateness. Likewise, upon confirming content validity and construct validity, research tool was implemented on a sample of 30 subject to reassure questionnaire reliability and relevant data were investigated by two alpha coefficient and retesting. The findings indicated that the questionnaire is reliable as seen in above table

Data analysis techniques

In qualitative section, data analysis method was theoretical coding extracted from grounded theory; in quantitative section, data analysis was done by using descriptive and inductive statistics (factor analysis, exploratory and single T Tests). Noteworthy, SPSS-V22 software package is used in present study.

2. Result

In this sector, all data are analyzed by using scientific methods. Since this is a mixed research, data analysis includes two parts: qualitative data analysis and quantitative data analysis. Below, we analyze the contents from interviews data analysis.

Analyzing qualitative data

Provided answers to interview questions are analyzed in the framework of recognized codes by experts' opinions to devise curriculums for virtual schools in the second circle of Khaf high schools.

Table 1: the list of all extracted concepts from semi-structured interviews with experts

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Interviewees' code	Source	Open coding (index) Basic units	Critical coding (qus-)
I10, I6, I5, I1, I7	Zeraei et al., (2019)	Implementing virtual curriculum in schools will be surveyed.	Measuring needs
I13, I14, I15	Zeraei et al., (2019)	Virtual curriculum is conducted for relevant region.	
I12, I5, I14, I2, I11	Zeraei et al., (2019)	Curriculum content will be prepared based students' needs locally.	
I3, I4, I11, I5	Interview	Schools' facilities are monitored to conduct virtual curriculum.	
I12, I8, I3	Interview	To monitor needs of teachers/students, regional training managers are asked for aid.	
I2, I6, I10, I14	Shafeipour Motlagh (2011)	virtual curriculum matches to local culture.	Cultural compatibility and personal differences
I11, I9, I10, I14, I5	Interview	Khaf social culture plays a vital role in selecting virtual curriculum content.	
I6, I1, I13	Interview	In curriculum, cultural differences of the region are paid attention	
I11, I7, I10, I3, I10	Interview	In curriculum, students' personal differences are paid attention.	
I8, I3, I15, I12, I2	Mosa Ramezani et al., (2019)	There a few number of students and all will receive special content adapted to their cultural propensities.	
I5, I11, I4, I13	Mosa Ramezani et al., (2019)	Curriculum is flexible toward environment	Flexibility
I1, I2, I11, I7, I15	Mosa Ramezani et al., (2019)	Curriculum is flexible toward students' daily needs.	
I8, I7, I11, I18	Rezaei (2017)	Teachers are free is providing other contents.	
I7, I3, I9, I12, I17	Interview	Teachers are free in holding classes and providing virtual content in different places.	

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I1, I9, I13	Interview	Curriculum is provided considering available technological equipment.	
I6, I7, I5, I7	Mosa Ramezani et al., (2019)	Delivered content in curriculum would encourage students to make activities.	Challenge
I10, I3, I18, I2	Narimani et al., (2020)	Curriculum content is attractive.	
I7, I5, I1, I7	Narimani et al., (2020)	Curriculum motivates the sense of competition among students.	
I11, I8, I4, I9	Interview	Curriculum content forces teachers to learn.	
I4, I2, I6	Interview	Curriculum motivates students toward more searches and studies.	
I4, I2, I8, I15, I9	Interview	Curriculum challenges daily issues.	
I8, I2, I19, I1	Interview	Curriculum invites teachers to make researches.	
I11, I1, I15, I8, I6	Rezaei (2017)	A remarkable feature of Curriculum is to encourage to research.	
I6, I9, I3, I5	Interview	Curriculum is devised proportionate to students' ages.	Proportionate
I2, I1, I10, I7	Arcorfol & Abaido (2015)	Curriculum content is proportionate to regional facilities.	
I10, I6, I5, I1, I7	Mamadua (2019)	Curriculum content is synchronized to technological mechanisms available for teachers and students.	
I13, I14, I15	Interview	Curriculum is devised based on the needs by both society and students.	
I12, I5, I14, I2, I11	Rezaei (2017)	Curriculum enhances lifelong learning.	
I3, I4, I11, I5	Interview	Through Curriculum, teachers are more motivated to use dynamic methods.	
I6, I8, I10, I17, I4	Interview	All regional students access to virtual curriculum.	Easy access
I10, I8, I1, I3, I4	Jafari (2014)	Needed IT to implement Curriculum is available for students.	

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I3, I1, I5, I14, I16	Interview	Teachers can use virtual Curriculum easily.	
I2, I6, I10, I14	Interview	In schools, virtual facilities are available for teachers.	
I13, I9, I5, I4, I12	Afkari et al., (2019)	Teachers have adequate knowledge to transfer to students.	Knowledge
I5, I8, I7, I6, I4	Interview	Teachers update their knowledge on IT.	
I5, I11, I4, I13	Afkari et al., (2019)	Teachers have adequate knowledge on using virtual Curriculum	
I1, I2, I11, I7, I15	Interview	Teachers enjoy research knowledge.	
I8, I7, I11, I18	Interview	Teachers instruct curriculum by a knowledge approach in digital age.	
I5, I8, I7, I6, I4	Jafari (2014)	Teachers have adequate recognition on students and their needs in virtual space.	
I5, I8, I7, I6, I4	Interview	Teachers are fully aware of them and their training needs.	
I7, I3, I9, I12, I17	Interview	Teachers have the skills to transfer virtual Curriculum rightly.	Skill
I1, I9, I13	Interview	Teachers have skills to control virtual classes.	
I3, I7, I19	Interview	Teachers are able to use contributive instruction methods in virtual space.	
I11, I3, I14, I12, I9	Interview	Teachers have skills of finding talents through virtual Curriculum.	
I10, I1, I12, I14	Arcorfol & Abaido (2015)	Teachers have skills to use options in virtual class.	
I6, I7, I5, I7	Mamadua (2019)	Teachers have positive attitude toward virtual Curriculum.	Attitude
I10, I3, I18, I2	Interview	Teachers believe that virtual Curriculum is step toward globalization.	
I7, I5, I1, I7	Arcorfol & Abaido (2015)	Teachers ask students to make their attitudes toward virtual space more open and flexible.	

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I4, I2, I8, I15, I9	Grimos (2020)	Teachers hope changes in behaviors and attitudes toward virtual Curriculum.	
I8, I2, I19, I1	Interview	Teachers encourage other to use virtual Curriculum and changes in attitudes.	
I11, I1, I15, I8, I6	Mamadua (2019)	Teachers believe that virtual Curriculum is an important step toward performance promotion and optimizing them and their students.	
I6, I9, I3, I5	Cortz (2020)	Curriculum assessment is toward learning schools.	Measurement and assessment proportionate with
I2, I1, I10, I7	Interview	Assessing virtual Curriculum is toward learning promotion.	
I4, I2, I8, I15, I9	Grimos (2020)	Assessing is proportionate to represented Curriculum content.	
I8, I2, I19, I1	Interview	Learning measurement criteria are predefined.	Transparency of measurement criteria for virtual learner
I11, I3, I14, I12, I9	Interview	Students' learning measurement criteria will be changed proportionated to instruction techniques.	
I8, I7, I11, I18	Cortz (2020)	Students' Learning measurement criteria are fully clear.	
I7, I3, I9, I12, I17	Cortz (2020)	Students are assessed based on performance and competency measures by teachers.	
I1, I9, I13	Interview	Teachers use dynamic methods for measurement.	Using various measurement and assessment techniques
I6, I7, I5, I7	Interview	Teachers use self – assessment as the most important step in evaluation.	
I8, I7, I11, I18	Interview	Students use a combination of assessment techniques.	
I7, I3, I9, I12, I17	Interview	Students' assessment is evolutional	
I6, I7, I5, I7	Interview	Despite of virtual training, students' assessment is traditional.	
I10, I3, I18, I2	Interview	Students' behavioral change is a factor of assessment.	
I7, I5, I1, I7	Interview	Students' assessment is flexible.	Flexible

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	I11, I3, I14, I12, I9	Grimos (2020)	According to environment, teachers make measurement.	
	I7, I5, I1, I7	Interview	Teachers assess based on students' received facilities.	
I3, I7, I19	I3, I7, I19	Interview	Devising an operational plan to provide virtual curriculum in the second circle of high schools	
I11, I3, I14, I12, I9	I11, I3, I14, I12, I9	Interview	Determining priorities' to improve the quality of virtual training	
I10, I1, I12, I14	I10, I1, I12, I14	Interview	Continuous evaluation of virtual training quality	
I3, I7, I19	I3, I7, I19	Interview	Establishing virtual training specialized center in Ministry of Education and Training including management, leaders and superior employees to measure training needs	
I11, I3, I14, I12, I9	I11, I3, I14, I12, I9	Interview	Right goal setting to develop virtual training development based on available resources	

Results from this section indicate that such components as goal, content, learning process, instructor and assessment are designing aspects of virtual curriculum in Khaf second circle high schools. These aspects can be seen in blow table separately:

Table 2: aspects and components of virtual curriculum in Khaf second circle high schools

Indices	Component	Aspect	Construct
5	Measuring the needs	Goal	virtual curriculum in Khaf second circle high schools
5	Cultural computability and personal differences		
5	Resilience		
8	Challenge	Content	
6	Proportionate and motivating		
4	Easy access		
7	Knowledge	Instructor	
5	Skill		
6	Attitude		
3	Measurement and assessment appropriateness to goals, content and learning resources	Assessment	
4	Transparency of measurement criteria for virtual learning		
6	Using varied assessment and measurement methods		
3	Flexible assessment and measurement		
	Devising an operational plan to provide virtual curriculum in the second circle of high schools		Virtual curriculum strategies for second circle of high schools
	Determining priorities' to improve the quality of virtual training		
	Continuous evaluation of virtual training quality		
	Establishing virtual training specialized center in Ministry of Education and Training including management, leaders and superior employees to measure training needs		

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	Right goal setting to develop virtual training development based on available resources	

Noteworthy, in qualitative section, in addition to identify the components of virtual school curriculum in the second circle of high schools, strategies on executing virtual school curriculum in the second circle of high schools were also studied and the results indicated that devising operational plan to provide virtual school curriculum in the second circle of high schools, Determining priorities' to improve the quality of virtual training, Continuous evaluation of virtual training quality, Establishing virtual training specialized center in Ministry of Education and Training including management, leaders and superior employees to measure training needs and Right goal setting to develop virtual training development based on available resources are all identified as such strategies.
Based on achieved results from reviewing theoretical basics and qualitative section, one can draw current study conceptual model as below:

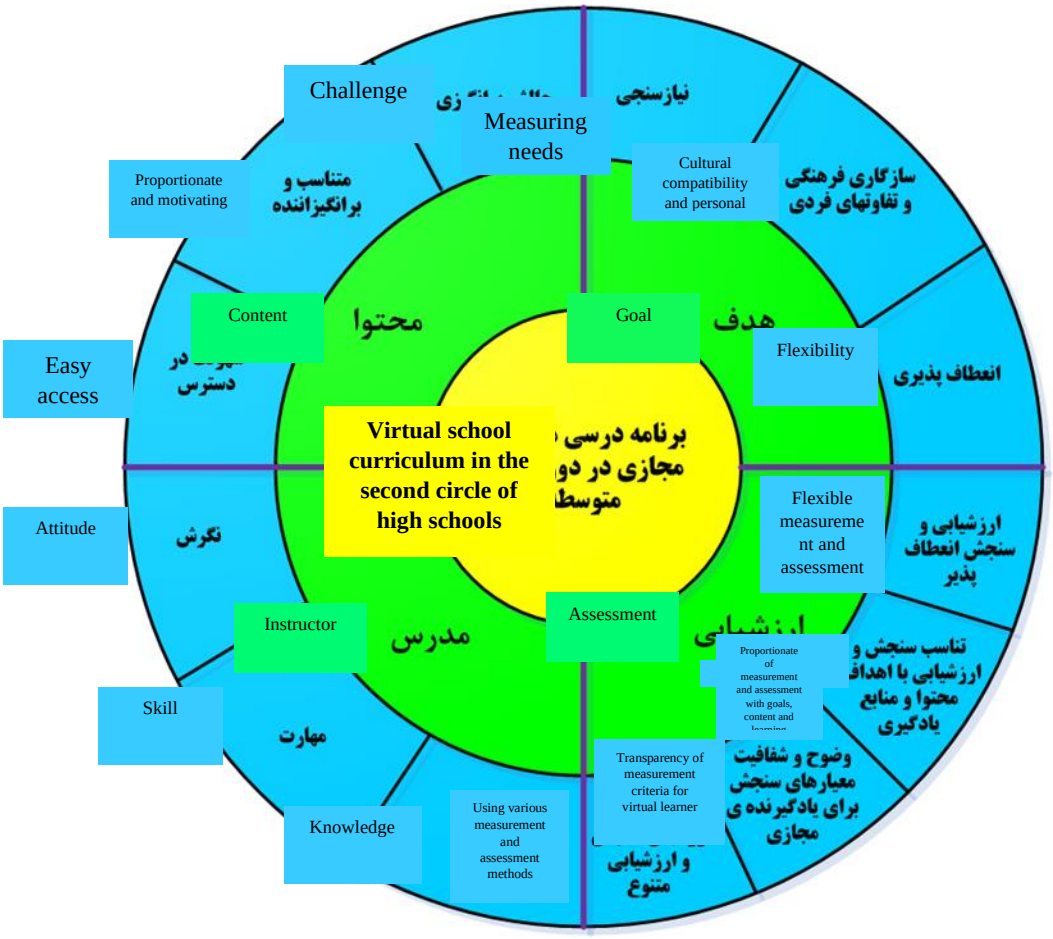

Figure 1: second circle of high school's virtual curriculum model

Analyzing quantitative date

In this section, we analyze quantitative data by using SPSS-V22 software package. Based the results achieved from qualitative section on the concept of virtual school curriculum in the second circle of high school, 67 indicators were recognized and upon examining content validity by CVR and CVI forms, all of them were supported. Below, we use exploratory factor analysis for these indicators.

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According to results from qualitative section and content validity, exploratory factor analysis was used for these indicators. The table of their commonalities show that no indicator is omitted since all of them were over 0.5 for all indicators.
In below table, one can observe total variance clarification. This table includes three parts.

Table 2. Clarifying the variance of virtual school curriculum in the second circle of high school

Total diffused square loads			Total extracted square loads			Preliminary special values			Factors
Aggregation (%)	Variance	Total	Aggregation (%)	Variance	Total	Aggregation (%)	Variance	Total	
13.840	13.840	6.505	26.703	26.703	12.551	26.703	26.703	12.551	1
22.849	9.009	4.234	33.713	7.010	3.295	33.713	7.010	3.295	2
30.796	7.947	3.735	38.012	4.299	2.021	38.012	4.299	2.021	3
35.388	4.592	2.158	41.681	3.669	1.724	41.681	3.669	1.724	4
39.406	4.018	1.888	45.029	3.348	1.573	45.029	3.348	1.573	5
43.385	3.979	1.870	48.109	3.080	1.447	48.109	3.080	1.447	6
47.298	3.913	1.839	50.890	2.782	1.307	50.890	2.782	1.307	7
50.885	3.587	1.686	53.617	2.726	1.281	53.617	2.726	1.281	8
54.012	3.127	1.470	56.106	2.489	1.170	56.106	2.489	1.17	9
57.117	3.106	1.460	58.399	2.293	1.078	58.399	2.293	1.078	10
60.034	2.917	1.371	60.634	2.234	1.050	60.634	2.234	1.05	11
62.792	2.758	1.296	62.792	2.158	1.014	62.792	2.158	1.014	12
64.935	2.738	1.287	64.935	2.143	1.007	64.935	2.143	1.007	13
						66.790	1.855	0.872	14
						68.655	1.865	0.876	15
						...	...	...	...
						100.000	0.364	0.171	67

In above table, 13 first factors' values are greater than 1 and remain in analysis. These factors clarify about 65% of variance for indicators of virtual curriculum in the second circle of high school. Scree plot supports above findings and identified the same 13 factors.

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As mentioned, based on results from interviews, the components of virtual curriculum in the second circle of high school include 13 components and 67 indicators. In above table, these components have special values greater than 1 and remain in analysis. These factors clarify 51% of virtual curriculum in the second circle of high school indicators. Also, scree plot supports the same results. In matrix table, rotated factors on indicators concerning each component of virtual curriculum in the second circle of high school are mentioned and named on the basis of literature, background and extant theories.

Table 3: the components of virtual curriculum in the second circle of high school

Number of indicators	Abbreviation	Component
15	Purp	Goal
18	Cont	Content
18	Teach	Instructor
16	Eval	Assessment

3. Conclusion and discussion

Present research is conducted by the aim of virtual curriculum in the second circle of high school. To the same reason, aspects and components of virtual curriculum in the second circle of high school were initially identified. Results indicate that the aspects of virtual curriculum in the second circle of high school include goal, content, instructor and assessment. Noteworthy, curriculum is, in fact, one of the main approaches in educational system and plays a vital role in students' learning results. It also includes unofficial processes and involves both explicit and implicit approaches. In devising curriculum for each field, it is necessary to recognize the related and important elements that are also proper and important for total curriculum. Thus, whenever learning organization elements were selected, they should be used for continuance, sequence and cohesion.

In present study, it was mentioned that the goal is the foremost and most importance element in curriculum and goals should be set for designing curriculum. In designing a curriculum proportionate to secondary school which follows virtual training, one should initially pay attention to the needs of this period. It is too important to know what needed by students, teachers and training assistants. On the other hand, considering secondary school students' personal differences is a radical factor which should be paid attention in goal setting. Cultural adaptability between curriculum and accepted values in the society is too important and it should be paid attention to enhance students' national identity and other good consequences. The aim of curriculum should not be devised and acted in a concentrated manner; rather, it should have necessary resilience to conduct contents proper for environment. We mentioned content. In designing curriculum, one should specially pay attention to challenges of delivered content and a persuasive program. Students should not follow frustrating and disproportionate materials and this should be respected in devising training content. Additionally, curriculum is valuable if accessed by students easily.

Instructor is another important factor which should be considered in devising curriculum. Instructor is the key element in pedagogy process. It causes his/her further accountability than others. Adequate knowledge to deliver curriculum, positive attitude on curriculum and skills in delivering curriculum are, *inter alia*, the indicators of a skillful and professional instructor. Finally, assessment is a very important factor in all training subjects. Undoubtedly, one of the most important steps is to adjust curriculum. In preliminary step, assessment is conducted to make clear how learning experiences and activities are related to predetermined goals and to what extent they are adapted to important psychological principles (before starting the program). Besides, each set of learning experiences and activities are measured by criteria imagined to be correct to some extent.

Broader investigation of learning activities and experiences to identify their returns are goals of assessment and show the importance and necessity of assessment after planning. Assessment is a

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process to investigate how learning experience in the adjusted and organized manner can yield to real desired results. Hence, assessment process includes weaknesses and strengths of plan. It yields not only to examine the validity and rightness of radical hypotheses by which training program are adjusted but also to examine the conditions of certain factors efficacy.

Assessment process is to determine the goals of training system actually through training programs since the main aim of goal setting is to conduct desired changes in learners' behavioral patterns. Thus, assessment is the process of determining changes in actual behaviors. Assessment has two important aspects: (1) assessments should measure learner's behaviors and (2) assessment should be overtime and more than one time.

In present study, we pointed out strategies on virtual curriculum in the second circle of high school which include devising operational plan to provide virtual school curriculum in the second circle of high schools, Determining priorities' to improve the quality of virtual training, Continuous evaluation of virtual training quality, Establishing virtual training specialized center in Ministry of Education and Training including management, leaders and superior employees to measure training needs and Right goal setting to develop virtual training development based on available resources.

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