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Hidden Curriculum Scale of an Education Faculty: A Validity and Reliability Study

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Abstract

The aim of this research is to conduct a scale development study as a data collection tool that can be used to determine the hidden curriculum of education faculties. The study group in the research is comprised of 3rd and 4th year teacher candidates studying (n = 406) at eight different departments of an education faculty of a state university in Turkey. A personal information and questionnaire form, including the candidate scale items, were used as data collection tools in the study. The data obtained were analyzed with the SPSS 22.0 and AMOS Programs. Both exploratory (EFA) and confirmatory factor analysis (CFA) were used to determine the factor structure of the scale. As a result of the analysis, a scale consisting of four sub-dimensions and 29 items was obtained. The total variance for the four factors in the scale was calculated as 60.355 %. The DFA result $\chi^2 = 1.668$; RMSEA = .044; SRMR = .078; CFI = .958, AGFI = .877, GFI = .900 was found to have acceptable fit values. Cronbach's alpha coefficient for the whole scale was calculated as 950. When the independent variable significance analysis was examined, it was seen that the items had a significance of over 40 percent. Therefore, it is possible to conclude that the items were suitable for the validity and reliability of the scale and in line with the confirmatory factor analysis. On the other hand, when an analysis was conducted using the same artificial neural network model based on each sub-factor, it was seen that the sub-dimensions of each dimension showed significance over 50 %, indicating that the sub-sub-dimensions had a consistent structure. The validity and reliability analysis of the faculty of education hidden curriculum scales showed that the scale was valid and reliable for prospective teachers.

Key words: *hidden curriculum; scale; faculty of education; teacher candidates; curriculum theory.*

Introduction

A curriculum can be defined as a set of goals prepared for organizing a qualified and quality education system at a national or international level in a country, as well as training qualified manpower to ensure the progress and development of the country. Traditionally, Tyler (1957:79) defined curriculum as "all the learning experiences planned and directed by the school to attain its educational goals". Varış (1996) defined curriculum as an entire process that included all of the educational activities organized in an educational institution.

Kısakürek (1969), on the other hand, mentioned that educational programs were a tool that guided the activities carried out in many subjects, from the behavioral standards of learners to the activities applied in the learning-teaching process. Therefore, the curricula serve as a bridge for a national education policy based on the development of a nation in unity and solidarity to reach the remotest corners of the country and to be internalized throughout the country (Özdemir, 2009, p. 127).

Generally, two types of curricula are implemented in schools: The first is the curriculum prepared by the authorized institutions or private institutions and closely followed and implemented by the schools. It is also called the "official curriculum", "formal curriculum", and "written curriculum". The second type of curriculum implemented in schools, on the other hand, is the hidden (implicit) curriculum, in which the content and components are not as clear as in the official curriculum, but the students are affected by it more than by the official curriculum. The hidden curriculum is also referred to as the "implicit curriculum, concealed curriculum, unwritten curriculum" in the relevant literature (Yüksel, 2004, p. 7).

Literature Review: Hidden Curriculum

Even though there are various theories regarding the time when the concept of the hidden curriculum first emerged, it is commonly mentioned that the concept was first used in Willard Waller's work titled "The Sociology of Teaching" in 1932 (Eisner, 1994 cited in Yüksel, 2004:8). However, it was observed that many researchers working on the hidden curriculum put forward a common view on the argument that the concept was first used by Philip Jackson in the USA in 1968 (Gordon, 1982; Hemmings, 2000; Lynch, 1989; Portelli, 1993; Yüksel, 2004).

In order to understand what the hidden curriculum really is, it is important to analyze the layers of the curriculum in terms of different perspectives. For example, as Lalor (2016) emphasized, based on the ideas proposed by Martin-Kniep (1999), there were some layers in the curriculum:

- the formal curriculum, which describes what students should be aware of, be able to do, and appreciate;
- the operational curriculum, which converts the formal curriculum into a training scheme;

– the taught curriculum, which is delivered in a classroom;
– the assessed curriculum, or what is evaluated through formal measures, and
– the learned curriculum, or what students take away and understand as a result of their learning experiences.

Similarly, Posner (2004) classified five types of curricula in schools (Cook, 2015):

(a) The official curriculum. It is a curriculum in which the government or school administrations at the official level specifically write down the aims, objectives, materials, methods, and evaluation elements and teach according to this plan. It has been established and authorized by school bodies and is forwarded to schools in the form of a written paper. It is the project that defines what can be hypothesized.

(b) The operational curriculum. It is a curriculum implemented by teachers at colleges. Here, the schooling, knowledge, action, and strategy of teachers are definitive. It may differ from school to school. It is the transformation of theory into practice. It is the differentiation of the official program according to the school, the environment, and the teacher. It is the form of the official program implemented in practice. Therefore, it is more concrete.

(c) The null curriculum. The topics not covered by the curriculum include behavioral characteristics - in specific, the expertise, talents, and personalities that are not covered by the curriculum. Some problems are cursory, making them particularly unfinished.

(d) The hidden curriculum. It includes the norms and values that are not explicitly taught but that define the roles and types of behavior deemed appropriate for the school. The scope of the hidden curriculum includes administrative and organizational tools and regulations of the school such as school rules, architectural structure and decoration of the school building; time; extracurricular activities; school, student and environment interaction; social norms and values; ideology; textbooks; classroom climate, such as teachers' opinions and expectations, teachers' prejudice, classroom rules, teacher behavior, student characteristics, exams and student success.

(e) The extra curriculum. The curriculum involves sports, art, and cultural events rather than the tacit one that is not official. It is supervised and led by teachers. The involvement is voluntary. There are the studies coordinated beyond education in the classroom, such as the choir in schools, student groups, and conventions. Based on Posner's (2004) and Martin-Kniep's (1999) classifications of the layers of the curriculum, the structure of the curriculum can be conceptualized as in Figure 1. According to Figure 1, there are two opposite pairs of forces in the actualization of the curriculum process: the first opposite pair consists of the official and hidden curriculum, while the other one consists of the school-teacher and student sides. The official curriculum is mainly created by the governments based on the constitution of the governments, dominant political views, and dominant culture in the country, whereas the hidden curriculum mainly emerges in the social and local background where it manifests itself in the schools and classrooms. Secondly, the curriculum is actualized in the context

of teacher and student agencies. Teachers, as well as schools, ignore some parts of the curriculum (the null curriculum) and add extra-curriculum which manifests itself as the taught curriculum. However, students are not machines fully absorbing the taught curriculum because of their interests, characteristics, capabilities so for each individual, the taught curriculum discloses on as the learned curriculum. The process from the taught curriculum to the learned curriculum is actualized in the form of operational curriculum.

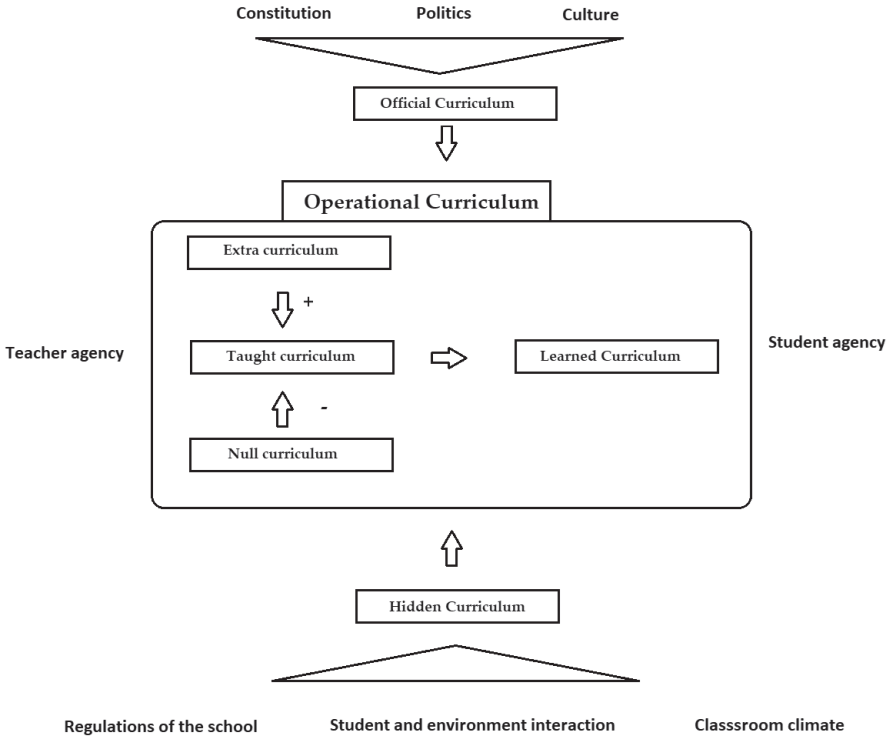

Figure 1. Structure of the curriculum in terms of Posner's (2004) and Martin-Kniep's (1999) classifications of the layers of the curriculum (modified from Duran and Barut, 2019)

In this respects, the hidden curriculum, like the official curriculum, plays a huge role in many respects because it is a process of providing students with the desired and expected beliefs and values through the rules that regulate various social relationships and routine work that underlie the experiences in school life and classroom climate (Elitok Kesici, Özdemir, Coşkun, 2018:1073).

The hidden curriculum contains, apart from the goals and activities clearly stated in the official curriculum, the basic qualities that students have attained with the knowledge, considerations, and various practices that emerge spontaneously in the learning and teaching process (Yüksel, 2004, p. 10). The hidden curriculum is the

school environment or school life that is outside of the programs and the principles that are consciously carried out at school (Paykoç, 1995). While Ginsburg and Clift (1990) expressed the hidden curriculum in the form of more secret messages given to students, Wren (1999) mentioned that the hidden curriculum was the symbol of the school culture and an organizational atmosphere created as a result of the interaction of the school with the society. According to Fischer (1977), on the other hand, the hidden curriculum represented all educational experiences in the school that were not specified in the official curriculum. The hidden curriculum is an unplanned experience that is implemented through the rules and regulations that are regarded as decisive in the school (Çengel, 2013, p. 36).

The hidden curriculum that forms the invisible, underwater part of an iceberg has a complex structure. It is one of the crucial periods in which hidden curriculum emerges during the breaks in schools where students are out of parental control, interact with their peers, and play games. A hidden curriculum can have both positive and negative effects on students (Yangın & Dindar, 2010). The effects of the hidden curriculum are not visible, but it affects the explicit curriculum in many ways (Çubukçu, 2012). Even though the hidden curriculum is not included in the official curriculum, it refers to the various attitudes and behaviors that are systematically brought to the individuals through education. One of the important goals of the hidden curriculum is to shape the students' attitudes, feelings, or habits and values in social life. These goals include conscious or spontaneous behavior towards teachers, other students, or other school staff, or the physical environment (Elitok Bıçak, Özdemir & Coşkun, 2018, pp. 1073-1074). Anderson (2001) mentioned that the hidden curriculum was the brainwashing or information loading process that increased the social privilege in the society.

The hidden curriculum can also be identified as the socialization process of education (Kentli, 2009, p. 83). According to Dreeben (1968), every child comes to school with a different parental background, and every student encounters the norms of the schools that will prepare them for social and public life. Margolis (2001), on the other hand, argued that the hidden curriculum, the school, and classroom life were the reproduction of schooling, which enabled them to understand the hegemonic functions of schools that protected the state power. When the hidden curriculum is considered from a sociological perspective, it can be seen that it plays an important role

– in the protection of the capitalist system,
– in the transfer of the dominant cultural values of the society to the students,
– in the socialization process of the students, and
– in the emergence of class differences in society (Tuncel, 2008, pp. 7-8).

The idea of the hidden curriculum can include further explanations for teachers as curriculum makers, superintendents, and school administrators, since the hidden curriculum is like the messages sent by the school staff, particularly by the teachers. As a consequence, teachers will also play a vital part in the advancement of educational

activities across the hidden curriculum for them and their pupils (Cornbleth, 1984). Therefore, sociologists, teachers, and bureaucrats in society should also be aware of this specific situation and take notice of the functions of the behaviors and values that are to be acquired in the context of the hidden curriculum. If such a partnership is not attained, the hidden curriculum will remain hidden even if it is noticed by a certain section of the society (Çengel, 2013, p. 37).

The concept of the hidden curriculum is closely related to the concept of professional socialization. Regardless of the relevant faculty or department, the hidden curriculum seems to be much more effective than the formal curriculum because students are supposed to acquire the attitudes and behaviors, and meet the demands as expected from them in the professional socialization process through the hidden curriculum (Ercan, Yüksel, Özkaya, Ocakoğlu, Yüksel and Uncu, 2009:82). Nevertheless, the fact that these attitudes, behaviors, and demands are not presented clearly as is the case in the formal curriculum can cause problems for students, faculty members, and faculty management from time to time. Therefore, it is important that much more consideration is paid to the hidden curriculum than usual and that more can also be done (negative or positive) by ensuring that the hidden messages of the learning and teaching experience are consistent with the aspirations outlined in the structured curriculum (philosophy, expectations, learning outcomes, etc.) (Killick, 2016).

The teaching profession is not a profession that can be satisfied with or practiced only by having the field knowledge and relevant skills. Instead, in the teaching profession, the individuals who train themselves in line with the goals of the society set an example for the society with their attitudes and habits, and educate their students with this awareness. Accordingly, it is an undeniable fact that the attitudes and values related to the profession that the teacher candidates studying at the "education faculties" will acquire through both official and hidden curricula are at least as important as the relevant knowledge and skills (Çeliköz & Çetin, 2004, p. 137). Therefore, a teacher should be able to acquire all the attitudes and behaviors that can have a positive effect on the student at the undergraduate level. These attitudes and behaviors are affected by the quality of education provided at the education faculty.

The more positive experiences a teacher candidate has at the faculty where s/he is studying, the more positive and qualified s/he will be for the teaching profession. Transforming the perceptions of teacher candidates about the hidden curriculum into positive ones is extremely significant in terms of obtaining more efficient results in education in the country (Elitok Bıçak, Özdemir and Coşkun, 2018). After the relevant literature had been examined, the lack of a hidden curriculum scale prepared especially for teachers or education faculties that train prospective teachers in our country was noticed and taken as the main starting point in conducting this study. It is assumed that the present study will fill an important gap in the relevant field as a data collection tool in the studies that determine the perceptions of teacher candidates regarding the hidden curriculum.

Methods

The present study was approved by the Scientific Research Ethics Committee of Agri İbrahim Çeçen University to be conducted with the decision dated January 27, 2021 and the document number E-95531838-050.99-2403.

Participants

The study group consisted of a total of 430 third- and fourth-year undergraduate students studying at 8 different departments of an education faculty of a state university in Turkey in the academic year 2020/2021 during the distance (online) education period in Turkey. First- and second-year undergraduate students studying at the same university, on the other hand, were not included in the study in line with the assumptions that they were in the process of adapting to the university environment, that they could not fully grasp the culture of the faculty and the existing hidden curriculum of the faculty, and in line with expert opinions. On the other hand, some students' responses were not included in the study due to some reasons given below. For this reason, the study was conducted based on the responses of 406 teacher candidates. The responses given by students that did not take the questions seriously, the responses containing the same options marked for all items, incomplete responses, or those in which some of the items were not answered, were excluded from the analysis.

The cluster sampling method, one of the probability sampling methods, was used in determining the study sample. Cluster sampling is used when different groups are automatically naturally formed or when they are artificially created for different purposes in the areas to be studied. These groups show similarities in terms of certain characteristics (Neuman & Robson, 2014; Yıldırım & Şimşek, 2018). Participation in the study was voluntary. As the students were chosen on the basis of the exam results organized by ÖSYM (Student Selection and Placement Center) in Turkey, it was accepted that the students studying in different departments had a homogeneous class structure due to their similar qualifications, characteristics and score range within their departments. Since each student in these classrooms created by OSYM was qualified to represent each department within its own group, there was no need for students to be re-grouped.

In determining the number of participants (study group), the rule "there must be at least five times more participants than the number of items" (Tavşancıl, 2019; Child, 2006) was taken into account. Since the number of items on the scale is 29, at least five times more pre-service teachers were included in the study.

When Table 1 is examined, it can be seen that the rate of female teacher candidates participating in the study (f: 295 = 72.7 %) is higher than that of male teacher candidates (f: 111 = 27.3 %). However, it can be seen that more fourth-year teacher candidates (f: 222 = 54.7 %) participated in the study.

Table 1
Frequency table of the participants in terms of their gender and grades

Gender	F	%
Female	295	72.7
Male	111	27.3
Total	406	100.0
Year (Grade)	F	%
3	184	45.3
4	222	54.7
Total	406	100.0

Table 2
The number of participant students in terms of their departments

Department	F	%
Pre-school Education	31	7.6
Elementary School Education	83	20.4
Social Studies Education	67	16.5
Turkish Language Education	10	2.5
Science Education	79	19.5
Elementary Mathematics Education	75	18.5
Painting (Visual Arts) Education	28	6.9
Computer Education and Instructional Technology Education	33	8.1
Total	406	100.0

When Table 2 is examined, it can be seen that the teacher candidates studying at the departments of Elementary School Teaching (f: 83), Science Education (f: 79), Elementary Mathematics Education (f: 75), and Social Studies Education (f: 67) participated in the study the most. This particular situation may be related to the quota numbers of students in these departments, as well as the volunteering status of teacher candidates regarding their participation in the study.

The Development of the Scale Items and the Analysis for the Scope Validity of the Scale

To develop the scale, initially, the studies conducted on the subject both nationally and internationally were examined individually and the relevant literature was reviewed (Synder, 1971; Vallance, 1983; Skelton, 1997; Marsh, 1997; Sambell & McDowell, 1998; Acker, Gaır, Margolis and Soldatenko, 2001; Margolis, 2001; Yüksel, 2004; Tietz, 2007; Kentli, 2009; Yangın & Dindar, 2010; Doğanay & Sarı, 2004; Simon & Willinsky, 1980; Kuş, 2009; Türedi, 2008; Tuncel, 2008; Moyse & Porter, 2015; Çengel & Türkoğlu, 2016; Alsubaie, 2015; Akbulut & Aslan, 2016; Lord, 2017).

Afterwards, an item pool consisting of 55 items related to the subject was created. While creating the item pool, expert opinion was sought to determine the content

validity of the items, as well as to identify the unnecessary and similar expressions. At this stage, the following path was followed: The pool consisting of 55-point items was generated and sent to *one of the lecturers (PhD)* who studied the hidden curriculum for the first time in Turkey. The same item pool was simultaneously sent to two lecturers and one teaching fellow *(1 Associate Professor; 1 Assistant Professor; Research Assistant with PhD)* from two different universities in the Curriculum and Instruction Departments.

As a result of the feedback received from the experts, it was decided that 20 items *(non-content, repetition, general expressions, etc.)* were regarded as problematic and were therefore removed from the item pool. Then, the items were read by two independent Turkish language teachers who had good diction and grammar knowledge and whose task was to determine whether the items were problematic in terms of expression and meaning. As a result of the feedback received from the teachers, it was decided that 4 items were problematic in terms of meaning and expression and were, therefore, removed from the scale. Then, after all the necessary corrections had been made, a pre-pilot application was carried out with 30 pre-service teachers so that the candidate scale could be evaluated by at least two pre-service teachers in each department. When the feedback from the pre-service teachers was examined, it was noticed that 2 items in the survey were not answered by the pre-service teachers. When the reason for this situation was examined, it was determined that the teacher candidates could not fully understand these two question items, and these two question items were removed from the candidate scale. As a result, there was a total of 29 items on the scale, and the validity and reliability studies of the scale development process were conducted over 29 items.

Grading was conducted with a five-point Likert-type scale over five categories to indicate the degree of agreement of the teacher candidates in the specified items (Strongly Agree = 5; Agree = 4; Undecided = 3; Disagree = 2; Strongly Disagree = 1). In the Likert-type attitude scales, items are generally graded over five categories (Finstad, 2010), and a five-point Likert-type scoring was preferred in the scale in the present study.

Data Analysis

The collected data were analyzed with SPSS 22.0 and AMOS. In the analyses, initially, the exploratory factor analysis was carried out followed by the confirmatory factor analysis. The sample adequacy was measured using the Kaiser-Meyer-Olkin (KMO) and Bartlett's test in factor analysis. The general Cronbach alpha coefficient was used to quantify reliability for the variables, which measured the uniformity of the elements. Sub-dimensions and related factor loadings were determined by the exploratory factor analysis. The maximum likelihood method was used in the confirmatory factor analysis, and within the scope of the reliability study of the scale, the Cronbach alpha coefficients for the whole scale and its sub-dimensions were calculated. In addition, the multi-layer artificial neural network method in SPSS was used in the confirmatory factor analysis of the data.

Results

Construct Validity of the Scale

Exploratory and confirmatory factor analyses were applied to determine the construct validity of the scale. Factor analysis was used to reveal the dimensions of the feature that was desired to be measured in the scale. The sub-dimensions of the scale were created with factor analysis.

Exploratory Factor Analysis

In determining the number of factors for the explanatory factor analysis, the rule of eigenvalue greater than 1, which is defended by Kaiser (1960) and known as the K1 method in the literature, was used. In the process of determining the items to be included in the explanatory factor analysis, it was made sure that the eigenvalues of the factors were higher than 1 and the item factor loadings were higher than .50. Subsequently, the model fit of the item factor structure obtained as a result of the exploratory factor analysis was tested with the confirmatory factor analysis.

First of all, in the exploratory factor analysis conducted to examine the construct validity of the scale, the correlation matrix between the items was examined, and it was analyzed whether there were significant correlations. It was observed that the relationships between the items were suitable for factor analysis. After that, the Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were conducted. It is suggested that the KMO ratio comparing the size of the observed correlation coefficients and the size of the partial correlation coefficients was less than 0.60 and the p-value Bartlett's test was less than 0.01; these indicated that the data set was suitable for "Principal Component Analysis" by some researchers (Büyüköztürk, 2012; SAGE Research Methods Datasets, 2016).

The KMO and Bartlett's test results were given in Table 3, and it was found that the KMO value was high (.933), and the Bartlett's test value ($p < 0.01$) was suitable for the principal component analysis of the data.

Table 3
KMO and Bartlett's test results

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.933
Bartlett's Test of Sphericity	Approx. Chi-Square	12960.895
	Df	1540
	Sig.	.000

Factor loadings indicate the correlation between the measured item and the structure. For this reason, the dimensions and factor loadings resulting from the principal component analysis were examined. As a result of the examination, firstly the items that did not get into any factor, and then the items that included both factors were excluded from the scale, respectively (Plotnikoff, 1994). It was seen that the structure

obtained as a result of this process consisted of 29 items that were grouped under 4 dimensions. Afterward, the internal consistency coefficients of the dimensions obtained were calculated, and it was seen that the Cronbach's alpha values were 0.950 for the whole scale, and varied between 0.862 and 0.933 for the first four factors.

As a result, as seen in Table 4, the final form of the scale after the explanatory factor analysis was shaped as 4 factors and 29 items.

Table 4

Cronbach Alpha results for the corresponding items

items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
m21	8.9064	6.762	.504	.473
m23	8.7192	7.353	.405	.547
m25	9.0640	7.433	.349	.587
m29	9.0222	7.128	.352	.588

The matrix of components rotated by the Varimax method in factor analysis is given in Table 5 and the eigenvalue graph is given in Figure 2. The reason why Varimax is used as a rotation method in factor analysis is to ensure that factor variances get the highest value with a small number of variables.

According to the results of the analysis given in Table 5, there was a total of 9 items related to the factor "teacher agency", with factor loadings ranging from 0.652 to 0.810. The relevant factor explained 20.72 % of the total variance. The second factor of the scale was related to "institution" and consisted of 9 items in total. Factor loadings for the relevant factor varied between 0.557 and 0.752, and it was observed that it explained 15.455 % of the total variance. The third factor of the scale was related to attitudes and consisted of 6 items in total. The factor loadings of the items related to the relevant factor varied between 0.578 and 0.765, explaining 13.833 % of the total variance. Finally, the fourth factor of the scale consisted of issues related to "student agency", and it was seen that the factor consisted of 5 items in total. The relevant factor explained 10.347 % of the variance. As a result, the total variance explained by these four factors was calculated as 60.355 %.

Table 5

Exploratory factor analysis results and the clusters of items for each factor

		Component			
		Factor 1	Factor 2	Factor 3	Factor 4
Factor1	m49	.810			
	m55	.804			
	m50	.801			
	m53	.791			
	m51	.764			
	m54	.740			
	m47	.710			
	m46	.655			
	m52	.652			

		Component			
		Factor 1	Factor 2	Factor 3	Factor 4
Factor2	m1		.752		
	m3		.726		
	m22		.706		
	m4		.704		
	m26		.665		
	m20		.662		
	m8		.645		
	m2		.576		
	m6		.557		
Factor3	m32			.765	
	m31			.736	
	m34			.717	
	m30			.685	
	m35			.648	
	m14			.578	
Factor4	m41				.709
	m40				.697
	m44				.672
	m39				.658
	m43				.649
Total Variance Announced (%)=60.355		20.720	15.455	13.833	10.347

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization. [a]
a. Rotation converged in 5 iterations.

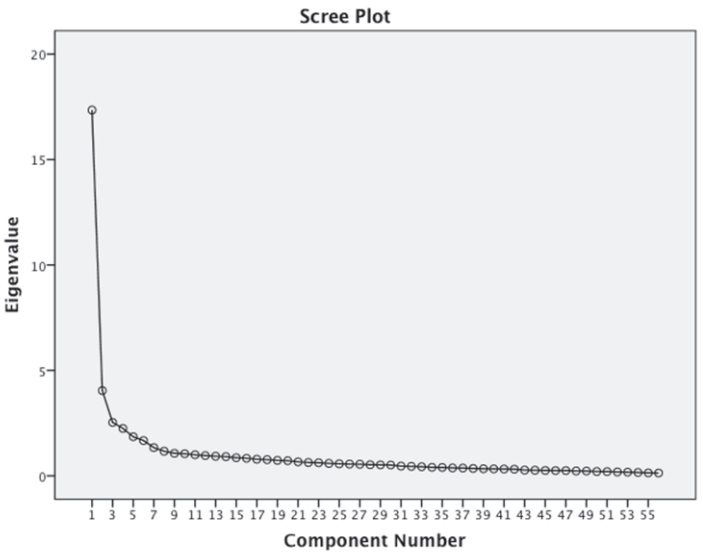

Figure 2. Factor structure distribution chart shows that the scale should have four factors

Confirmatory Factor Analysis

Confirmatory factor analysis was performed to test the model obtained as a result of explanatory factor analysis. The analysis was performed using a structure consisting of 29 items and 300 randomly selected data from the sample used in the exploratory factor analysis (N = 406) (Fabrigar, Wegener, MacCallum & Strahan, 1999). The AMOS program was used for the confirmatory factor analysis, and the fit index values obtained as a result of the analysis were given in Table 6 and the model in Figure 3. First of all, the value obtained by dividing the Chi-square by the degrees of freedom was calculated as 1.668. If this value is below 5, it indicates that the model is acceptable, and if it is below 2, it indicates that the model is good (Şimşek, 2007). In this context, the value obtained showed that the model was an acceptable one.

In addition, RMSEA (Root Mean Square Error of Approximation), GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), CFI (Comparative Fit Index), and SRMR (Standardized Root Mean Square Residual) values were also calculated. Within the scope of the recommendations obtained in the AMOS program, expert opinion was taken and a correlation between some error terms was allowed. Afterward, the fit index values were calculated again, and it was found that the values calculated by Hair et al. (1998), Kline (2011), Raykov, and Marcoulides (2006) were at an acceptable level according to the reference ranges specified in the sources.

Table 6
Fit statistics value ranges and values of the model show that the index values are at acceptable levels.

Fit Index	Good Fit	Acceptable Fit	Model Values
$\chi 2/df$	$0 \leq \chi 2/df \leq 2$	$2 < \chi 2/df \leq 3$	1.668
RMSEA	$0 \leq RMSEA \leq .05$	$.05 < RMSEA \leq .08$	0.044
p value for test of close fit (RMSEA< .05)	$.10 < p \leq 1.00$	$.05 \leq p \leq 1.00$	0.954
GFI	$\geq .95$	$\geq .90$	0.900
AGFI	$\geq .95$	$\geq .85$	0.877
CFI	$\geq .97$	$\geq .95$	0.958
SRMR	$\leq .05$	$\leq .1$	0.078

Finally, it was seen that the standardized factor loadingss according to the model created ranged from 0.88 to 0.33. Additionally, it was observed that there was no meaningless structure between the t-values. As a result, a structure consisting of 4 factors and 29 items was obtained according to the results of the analysis conducted within the scope of scale development studies. The results of the analysis showed that the scale could be used safely in studies to be conducted with the aim of "hidden curriculum in education faculties".

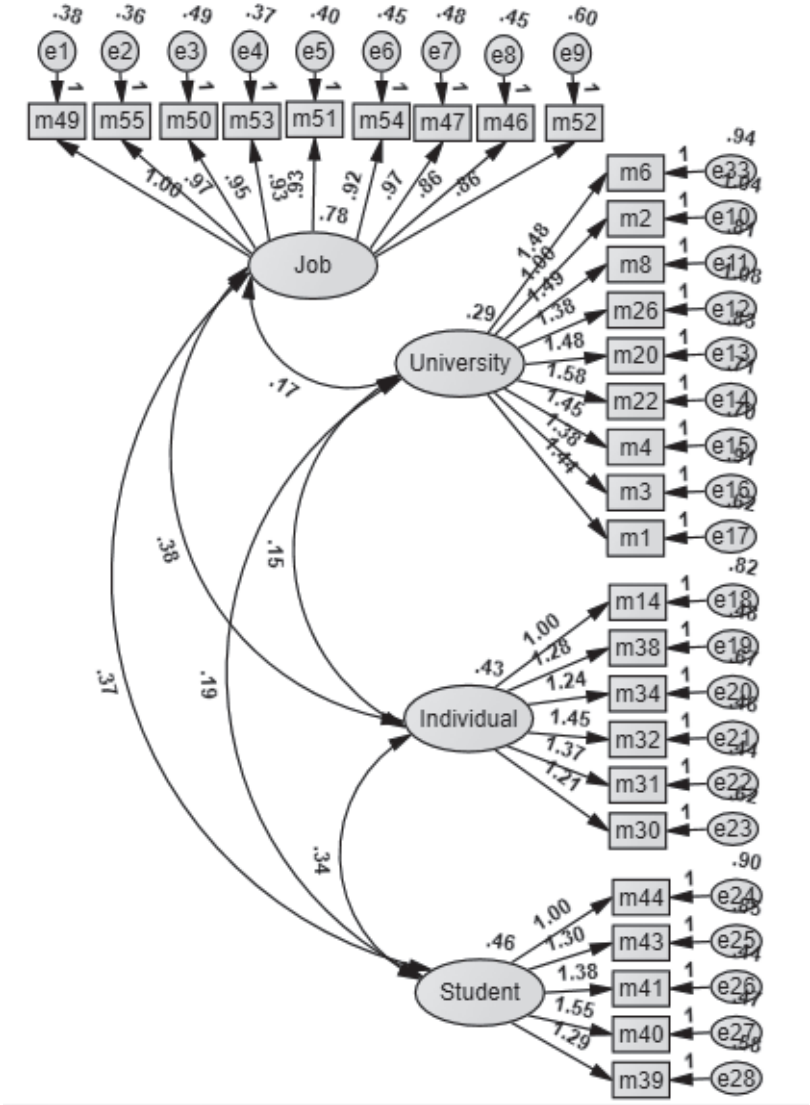

Figure 3. Confirmatory factor analysis results

After the confirmatory factor analysis was performed, the data were examined with artificial neural networks and the significance of the items for the four-factor structure obtained was analyzed (importance analysis). In the artificial neural network, 273 data items were used for training, 133 data items were used for testing, and 2 data items were excluded from the analysis because they were missing.

Table 7
Case processing summary for neural network analysis

Case Processing Summary			
		N	Percent
Sample	Training	273	67.2 %
	Testing	133	32.8 %
Valid		406	100.0 %
Excluded		2	
Total		408	

Two hidden layers were used in the artificial neural network. The entries consisted of 29 scale items, i.e. units. The output, on the other hand, consisted of four sub-dimensions created according to total scores. The activator function was the sigmoid function for both the hidden layer and the output layer. There were 7 units in the first secret layer and 5 units in the second secret layer. The general structure of the model is given in the figure below.

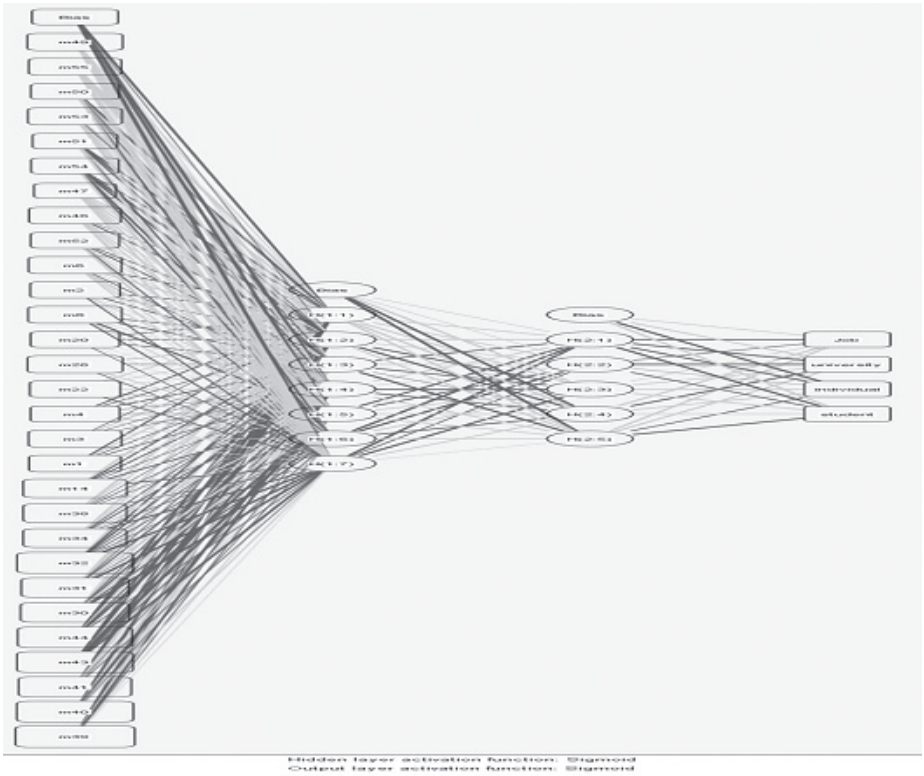

Figure 4. Structure of the artificial neural network

The model summary of the artificial neural network can be illustrated as follows. As can be seen, the relative error values of the dependent variables according to the training and test times can be examined as follows:

Table 8
Model summary for the neural network analysis

Model Summary			
Training	Sum of Squares Error		.945
	Average Overall Relative Error		.034
	Relative Error for Scale Dependents	Teacher agency	.042
		Institution	.024
		Attitude	.036
		Student agency	.035
	Stopping Rule Used	1 consecutive step(s) with no decrease in error[a]	
	Training Time		0:00:00,41
Testing	Sum of Squares Error		.671
	Average Overall Relative Error		.052
	Relative Error for Scale Dependents	Teacher agency	.066
		Institution	.033
		Attitude	.072
		Student agency	.039

a. Error computations are based on the testing sample.

When the independent variable significance analysis was examined, it was seen that the items had a significance of over 40 %. Therefore, it is possible to conclude that the items were suitable for the validity and reliability of the scale in parallel with the confirmatory factor analysis.

Table 9
Independent variable importance for the whole scale in terms of items

	Independent Variable Importance		
	Importance	Normalized Importance	
m39	.050	100.0 %	Student agency
m40	.048	96.0 %	Student agency
m32	.048	95.3 %	Attitude
m43	.048	95.3 %	Student agency
m44	.047	92,8 %	Student agency
m41	.045	90.1 %	Student agency
m30	.042	83.9 %	Attitude
m31	.042	82.4 %	Attitude
m14	.038	76.4 %	Attitude
m34	.038	76.2 %	Attitude
m38	.038	76.1 %	Attitude
m49	.032	63.7 %	Teacher agency

	Independent Variable Importance		
	Importance	Normalized Importance	
m26	.032	63.5 %	Institution
m53	.031	62.2 %	Teacher agency
m8	.031	61.4 %	Institution
m3	.031	60.6 %	Institution
m6	.031	60.5 %	Institution
m55	.030	60.1 %	Teacher agency
m1	.030	58.6 %	Institution
m46	.029	58.5 %	Teacher agency
m22	.029	56.7 %	Institution
m2	.028	55.5 %	Institution
m4	.027	54.4 %	Institution
m20	.027	54.1 %	Institution
m52	.027	53.6 %	Teacher agency
m50	.027	52.9 %	Teacher agency
m54	.026	52.5 %	Teacher agency
m51	.024	48.0 %	Teacher agency
m47	.022	43.7 %	Teacher agency

When the analysis was performed using the same artificial neural network model based on each sub-factor, it was seen that the sub-dimensions of each dimension showed importance over 50 %, which was an important finding in terms of the validity of the sub-dimensions.

Table 10

Independent importance analysis for each subfactor in terms of neural networks

Items	Teacher agency	Items	Institution on	Items	Attitude	Items	Student agency
	Normalized Importance				Normalized Importance		Normalized Importance
m49	84.4 %	m1	90.3 %	m32	88.9 %	m41	97.6 %
m55	57.7 %	m3	100.0 %	m31	88.6 %	m40	91.8 %
m50	71.4 %	m4	79.3 %	m34	100.0 %	m44	96.9 %
m53	100.0 %	m22	96.0 %	m30	92.1 %	m39	100.0 %
m51	62.8 %	m20	94.4 %	m38	98.5 %	m43	96.8 %
m54	72.3 %	m26	90.6 %	m14	80.1 %		
m47	83.2 %	m8	95.0 %				
m46	76.2 %	m6	86.7 %				
m52	88.6 %	m2	88.1 %				

Reliability of the Scale

The reliability of the scale was calculated by Cronbach's Alpha internal consistency analysis. As a result of the calculations, the Cronbach's Alpha coefficient for the whole scale was α = .950, α = .933 belonging to the first sub-dimension called "professional characteristics (teacher agency)", the sub-dimension called "university education (institution)" was α = .862, the sub-dimension called "attitudes" was calculated as α = .869 for the dimension and finally, α = .863 for the "student agency" sub-dimension. Calculated values are illustrated in Table 11.

Table 11
Cronbach Alfa Values

Whole Scale	Factor 1	Factor 2	Factor 3	Factor 4
0.950	0.933	0.862	0.869	0.863

Discussion

With the present study, a scale development study was carried out to develop a data collection tool that could be used to determine the hidden curriculum of education faculties. Factor analysis was conducted to determine the construct validity of the scale, and as a result, a measurement tool consisting of 29 items and 4 sub-dimensions was obtained. The first sub-dimension called "Teacher agency" consisted of 9 items; the second dimension called "Institution" consisted of 9 items; the third dimension called "Attitudes" consisted of 6 items, and the fourth dimension called "Student agency" consisted of 5 items. It seems that the scale that has been developed in this research focuses on the concept of agency of the hidden curriculum in this context. Teaching Agency is the ability to guide their professional development and contribute to their colleagues' growth in a motivated and positive manner. Instead of passively contributing to learning opportunities, teachers who have agencies are mindful of their contribution to their career development and want to pursue their objectives (Calvert, 2016). Teacher agency is formed as teachers want to manage or manipulate the curriculum to achieve the desired results and teachers are recognized as the interface between the official and hidden curriculum (Jenkins, 2019). When the scale was reviewed, the teacher agency factor seemed to have indicated the importance of the teacher agency in this respect. Table 12 below shows the significance of the teacher agency in this respect.

When items m49, m55, m50, m53, m51, m54, m46 were reviewed, it was pointed out that the responsibility of the teacher had a significant effect on the education and training process and that it also contributed to personal, moral, and social development in the long run. However, m52 and m47 show that the teaching profession is not a static identity, but it can change with the process and experience. Item m50 also shows that individuals also somehow relate to the mass media in the context of the profession in this respect.

Table 12
The items labeled as teacher agency factor seem to indicate the importance of the teacher agency in this respect.

Items	Expressions
m49	I realized that the responsibility of the teaching profession was too much.
m55	I realized that the teaching profession was a meaningful element in the completion of the education and training process.
m50	I realized that the mass media have a very serious effect on raising people.
m53	I realized that the teaching profession would make a great contribution to my personal, moral and social development.
m51	I saw that the teaching profession had a great importance in the transfer of values, beliefs and culture.
m54	I realized that the impact of the teaching profession would reflect upon society in the long run.
m47	I learned that learning by doing in education was the most permanent way.
m46	I learned that even if I did not like individuals personally, I had to respect their profession.
m52	I saw that perceptions about the teaching profession could change in the process.

The items labeled as institution factor seem to indicate that the structure, network, and culture of the institutions can be regarded as a significant factor in the hidden curriculum. Barley and Tolbert (1997, p. 96) define institutions as shared rules and typifications that identify categories of social actors and their appropriate activities or relationships. In this definition, institutions connect with everyday action by establishing types of actors and their recurrent context-relevant patterns of interaction. From their perspective, the agency is unconditionally framed by and exercised within the constraints of structure and context (Abdelnour, Hasselbladh, and Kallinikos, 2017). In this respect, items m1, m3, m4, m22, m20, m26, m8, m6 and m2 support the importance of the constraints of structure and context of the institution has a significant role in the agency in the context of the emergence of the hidden curriculum as well in terms of its culture, its management, the feedback mechanism, the characteristics of individuals, its response, the input given in the system and its physical and motivational space and structure (Table 13).

Table 13
The items labeled as institution factor seem to indicate that the structure, network and the culture of the institutions can be regarded as a significant factor in the hidden curriculum.

Items	Expressions
m1	I realized that the institutionalization culture of the faculty was developed.
m3	I have seen that the faculty management encourages students to take many extracurricular activities (clubs, associations, personal and professional development courses, etc.).
m4	I saw that professional roles and basic vocational education knowledge related to the teaching profession were taught in accordance with its purpose.
m22	I have seen that the faculty members give us various directions to gain creative and critical thinking skills.
m20	I saw that the faculty members encourage us to be active in class.
m26	I saw that faculty members encourage extracurricular activities (clubs, associations, personal and professional development courses, etc.).

Items	Expressions
m8	I noticed that the faculty has a unique culture.
m6	I learned which department I can apply to in the faculty when I have a problem.
m2	I noticed that the seating arrangement of the classrooms encouraged active participation of students in educational activities.

The items labeled Attitude as a factor seem to indicate the change of the personal attitudes of the individuals in the hidden curriculum. When the items were examined, it was found that they are related to positive attitudes which can be interpreted as the limitation of this scale since there are also negative attitudes attained in the hidden curriculum. It seems that individuals pointed out a definition proposed by Jackson (1990), stating that the hidden curriculum which makes students more adapted to real life in the classroom, makes them more social individuals (Table 14).

Table 14

The items labeled Attitude as a factor seem to indicate that it is related to positive attitudes which can be interpreted as the limitation of this scale since there are also negative attitudes attained in the hidden curriculum.

Items	Expressions
m32	I gained empathy skills.
m31	I realized that one should not speak without taking the floor.
m34	I learned to seek my rights within the group and environment I was in.
m30	I learned to be self-sacrificing.
m38	I learned to eliminate my prejudices.
m14	I realized that I need to pay attention to my personal care.

Student agency refers to the quality of interaction between students and their surroundings by their self-reflective and deliberate action. It includes diverse conceptualization of agency ("power") and agency ("will") (Klemenčič, 2015). The items labeled Student agency as a factor seem to indicate that students also emphasized the positive dimensions of the hidden curriculum improving their agency, therefore, it can be regarded as the second limitation of this scale (Table 15).

Table 15

The items labeled Student Agency as a factor indicating that students also emphasized the positive dimensions of the hidden curriculum improving their agency

Items	Expressions
m41	I learned to compete properly with my colleagues/friends.
m40	I have gained the habit of planned and scheduled work.
m44	I learned to be able to search the literature related to my field.
m39	I learned to be motivated for exams.
m43	I learned to do scientific research and think scientifically.

According to the result of the exploratory factor analysis (EFA), the total variance rate for the whole scale was calculated as 60.355 %. The scale structure with four factors and consisting of 29 items obtained by exploratory factor analysis (EFA) was subsequently tested with confirmatory factor analysis (CFA). It was found that the fit indices of the data obtained as a result of CFA coincided with the values in the relevant literature (Hu & Bentler, 1999).

When the independent variable significance analysis was examined, it was seen that the items had a significance of over 40 %. Therefore, it is possible to conclude that the items are suitable for the validity and reliability of the scale in parallel with the confirmatory factor analysis. If too many items had had signifcance 15 % or less, or if only one factor had had a very high significance level and others had not, we could have concluded that there was a problem with the validity and reliability of the scale. However, in this particular case not much of an asymmetrical situation was observed. However, it is possible to say that the student and individual dimensions are more important than the profession and university. In this context, this clustering can also be taken into account in the analysis. Since the use of artificial neural networks is new in terms of scale development in the field of education, it is thought that such data can be evaluated more clearly in future studies. This particular situation may indicate a higher-level clustering situation other than the classical factor analysis. When the analysis was performed using the same artificial neural network model based on each sub-factor, it was seen that the sub-dimensions of each dimension showed importance over 50 %, which showed that the sub-sub-dimensions had a consistent structure.

To reveal the reliability of the scale, Cronbach's Alpha internal consistency analysis was conducted both for four dimensions separately and for the whole scale. As a result of the calculations, it was found that "Teacher agency" was α = .933; for the "Institution" sub-dimension α = .862; for the "Attitude" sub-dimension α = .869; for the "Student Agency" sub-dimension α = .863; while for the whole scale the value was α = 950. The findings obtained as a result of the calculations revealed that the "Faculty of Education Hidden Curriculum Scale" was a reliable measurement tool.

Conclusion

Regardless of the related faculty or department, the hidden curriculum is far more influential in the future professions for the university students. The reason is that students must meet their behaviors, attitudes, and requirements via the hidden curriculum in the professional socialization phase. The absence of a hidden curriculum level particularly prepared for teachers or schools that trained prospective teachers in our country was the principal starting point for conducting this analysis while examining the related literature. The present study filled a significant gap in the subject area to assess teacher candidates' views of the hidden curriculum.

The results show that Cronbach's alpha coefficient for the whole scale was calculated as 950. When the independent variable significance analysis was examined, it was seen that the items had a significance of over 40 percent. Therefore, it is possible to conclude that the items were suitable for the validity and reliability of the scale in parallel with the confirmatory factor analysis. When an analysis was made using the same artificial neural network model based on each sub-factor, it was seen that the sub-dimensions of each dimension showed significance over 50 %, indicating that the sub-sub-dimensions had a consistent structure. The validity and reliability analysis of

the Faculty of Education Hidden Curriculum Scale showed that the scale was valid and reliable for prospective teachers.

It is seen that teacher agency, the role of institutions as constrained factors, attitudes, and student agency are important factors in the emergence of the hidden curriculum. Therefore, in terms of improving teacher agency and the role of institutions in the context of the hidden curriculum, the following recommendations can be offered (Calvert, 2016):

– planning school day organization so that teachers can interact frequently and work with colleagues to enhance teaching and learning;

– engaging teachers in data analysis and identification of teaching and learning problems;

– setting up learning groups where educators discuss practice challenges and take credit for the progress of colleagues and students;

– giving teachers the preference with whom they work and what they base their training on during their careers;

– making sure the advanced development is for continued improvement rather than assessment;

– resisting the attempt to expand or require a certain mode of career education without exploring the framework through which it would be carried out in detail.

The remaining factors indicate that the scales including the negative dimensions should be included in the future scales developed in terms of the hidden curriculum in the dimensions of Attitudes and Student agency.

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[1] *Sveučilište u Iğdıru*

Sažetak

Cilj ovoga istraživanja bio je provesti studiju o razvoju skale koja će poslužiti kao alat za prikupljenje podataka o skrivenom kurikulu na fakultetima obrazovnih znanosti. Uzorak ispitanika sastojao se od budućih nastavnika koji su na trećoj i četvrtoj godini studija (n = 406) na osam različitih odsjeka jednoga fakulteta obrazovnih znanosti na državnom sveučilištu u Turskoj. Alati za prikupljanje podataka korišteni u ovome istraživanju sastojali su se od upitnika o osobnim podatcima i ankete. Prikupljeni podatci analizirani su pomoću SPSS 22.0 i AMOS računalnih programa. Provedene su eksploratorna (EFA) i konfirmacijska faktorska analiza (CFA) kako bi se odredila faktorska struktura skale. Tim je analizama dobivena skala koja se sastoji od četiriju poddimenzija i 29 tvrdnji. Izračunato je da je ukupna varijanca za četiri faktora skale 60,355 %. Utvrđeno je da DFA rezultati $\chi^2 = 1,668$; RMSEA = 0,044; SRMR = 0,078; CFI = 0,958, AGFI = 0,877, GFI = 0,900 imaju odgovarajuće prikladne vrijednosti. Izračunat je i Cronbachov alfa koeficijent, čija je vrijednost za cijelu skalu 950. Kada su pregledani rezultati analize značajnosti nezavisne varijable, uočeno je da su tvrdnje imale značajnost veću od 40 %. Stoga se može zaključiti da su tvrdnje bile odgovarajuće za valjanost i pouzdanost skale te da su bile u skladu s konfirmatornom faktorskom analizom. Međutim, kada je provedena analiza pomoću istoga modela umjetne neuronske mreže koji se temeljio na svakom podfaktoru, uočeno je da su poddimenzije svake dimenzije pokazale značajnost veću od 50 %, što upućuje na to da podsubdimenzije imaju konzistentnu strukturu. Analiza skale valjanosti i pouzdanosti skrivenoga kurikula fakulteta obrazovnih znanosti pokazala da je skala valjana i pouzdana te da je budući nastavnici mogu koristiti.

Ključne riječi: *budući nastavnici; fakultet obrazovnih znanosti; kurikul; skala; skriveni kurikul.*

Uvod

Kurikul se može definirati kao skupina ciljeva koja je pripremljena kako bi se organizirao kvalitetan obrazovni sustav na nacionalnoj ili internacionalnoj razini u nekoj zemlji, kao i edukacija radne snage koja će pomoći napretku i razvoju te zemlje. Tradicionalno gledajući, Tyler (1957, str. 79) je definirao kurikul kao skup „svih iskustava učenja koja su planirana i usmjeravana od strane škole kako bi se postigli obrazovni ciljevi". Varış (1996) je definirao kurikul kao cjelokupni proces koji uključuje sve obrazovne aktivnosti koje se odvijaju u obrazovnoj ustanovi.

Kısakürek (1969) je, međutim, napomenuo da su obrazovni programi alati koji upravljaju aktivnostima koje se provode u sklopu mnogih predmeta u školi, od normi ponašanja učenika do aktivnosti koje se primjenjuju u procesu učenja i poučavanja. Stoga kurikuli nacionalnoj obrazovnoj politici služe kao staza temeljena na razvoju jedinstva i solidarnosti nacije kako bi se dosegnuli najudaljeniji dijelovi zemlje i kako bi se ti isti kurikuli usvojili širom zemlje (Özdemir, 2009: 127).

Općenito govoreći, u školama se provode dvije vrste kurikula. Prvi je kurikul onaj koji pripremaju ovlaštene ustanove ili privatne ustanove, a dosljedno ga provode i prate škole. Također ga se naziva „službenim kurikulom", „formalnim kurikulom" te „pisanim kurikulom". Druga vrsta kurikula koji se provodi u školama je skriveni (implicitni) kurikul, a u njemu sadržaj i komponente nisu tako jasno opisani kao u službenom kurikulu. Ipak, on na učenike ima puno veći utjecaj nego službeni kurikul. Skriveni se kurikul u relevantnoj literaturi još naziva „implicitnim i nepisanim kurikulom" (Yüksel, 2004: 7).

Pregled literature: skriveni kurikul

Iako postoje razne teorije o tome kada se po prvi put spomenuo pojam skrivenoga kurikula, uglavnom postoji suglasje oko toga da je taj termin prvi put spomenut u knjizi Willarda Wallera *Sociologija poučavanja*, 1932. godine (Eisner, 1994, citirano u Yüksel, 2004, str. 8). Međutim, uočeno je da su mnogi koji su se bavili istraživanjima o skrivenom kurikulu istaknuli zajednički stav o tome da je pojam prvi put 1968. godine koristio Philip Jackson u SAD-u (Gordon, 1982; Hemmings, 2000; Lynch, 1989; Portelli, 1993; Yüksel, 2004).

Kako bi se lakše razumjelo što je uistinu skriveni kurikul, potrebno je analizirati razine kurikula s obzirom na različite perspektive. Na primjer, kako je naglasio Lalor (2016) na temelju Martin-Kniepovih (1999) ideja, u kurikulu postoji nekoliko razina:

službeni kurikul, koji opisuje ono čega bi učenici trebali biti svjesni, što bi trebali moći napraviti te što bi trebali cijeniti

– operativni kurikul, koji pretvara službeni kurikul u izvedbeni plan
– poučavani kurikul, koji se poučava i izvodi u učionici
– ocijenjeni kurikul, koji obuhvaća ono što se procjenjuje na formalan način te
– naučeni kurikul, ili ono što bi učenici trebali razumjeti i zadržati kao znanje koje je rezultat procesa učenja.

Slično tome, Posner (2004) je klasificirao pet vrsta kurikula u školama (Cook, 2015):

a) Službeni kurikul. To je kurikul u kojemu vlada ili školska uprava na službenoj razini piše ciljeve, ishode, materijale, metode i elemente ocjenjivanja te provodi nastavni proces u skladu s tim planom. Takav satavljaju i odobravaju nadležna školska tijela i poslan je školama u obliku pisanoga dokumenta. On je projekt koji definira što se može pretpostaviti.

b) Operativni kurikul. To je kurikul koji provode nastavnici na fakultetu. Nastavni proces, znanja, postupci te nastavne strategije koje su u njemu navedene su konačne. Može se razlikovati od ustanove do ustanove. On je diferencijacija službenoga programa ovisno o školi, okruženju i nastavniku. Takav je kurikul konkretniji jer je on službeni program koji se provodi u praksi.

c) Nulti kurikul. Teme koje nisu pokrivene kurikulom uključuju karakteristike ponašanja – preciznije, stručnost, talente te osobnosti koje nisu pokrivene kurikulom. Neki su problemi površni te su zbog toga često nerazriješeni.

d) Skriveni kurikul. On uključuje norme i vrijednosti koji se ne poučavaju eksplicitno, no one definiraju uloge i vrste ponašanja koje se smatraju prikladnima za školu. Opseg skrivenoga kurikula uključuje administrativne i organizacijske alate i pravilnike škole poput školskih pravila, arhitektonke strukture i ukrašavanja školske zgrade; vrrijeme; slobodne aktivnosti; interakciju između škole, učenika i okruženja; društvene norme i vrijednosti; ideologiju; udžbenike; razrednu klimu koja uključuje mišljenja i očekivanja nastavnika, predrasude nastavnika, razredna pravila, osobine učenika, ispite te uspjeh učenika.

e) Dodatni kurikul. Ovaj kurikul uključuje sport, umjetnost i kulturna događanja, za razliku od prešutnoga, neslužbenoga kurikula. Njega provode i nadziru nastavnici. Uključivanje u njega je dobrovoljno. Postoje programi koji se koordiniraju i provode izvan učionice, poput školskoga zbora, učeničkih grupa i sastanaka. Na temelju klasifikacije razina kurikula koju su izradili Posner (2004) i Martin-Kniep (1999), struktura kurikula može se konceptualizirati na način prikazan na Slici 1. Kako se na njoj može vidjeti, postoje dva suprotna para sila u aktualizaciji kurikula: prvi suprotni par sastoji se od službenoga i skrivenoga kurikula, dok se drugi par sastoji od škole/nastavnika i učenika. Službeni kurikul uglavnom izrađuje vlada određene zemlje na temelju svojega sastava, dominantnih političkih gledišta i dominantne kulture u društvu, dok se skriveni kurikul uglavnom pojavljuje društvenoj i lokalnoj pozadini te se manifestira u školama i učionicama. Nadalje, kurikul se aktualizira i u kontekstu aktivnosti nastavnika i učenika. Nastavnici, kao i škole, ignoriraju neke dijelove kurikula (nulti kurikul) i uvode dodatni kurikul koji se manifestira kao kurikul prema kojemu se poučava. Međutim, učenici nisu strojevi koji ga u potpunosti upijaju jer imaju vlastite interese, osobine i sposobnosti. Stoga se kurikul prema kojemu se poučava prikazuje kao naučeni kurikul. Proces od kurikula koji se poučava do naučenoga kurikula provodi se u obliku operativnoga kurikula.

Slika 1.

U ovom smislu, skriveni kurikul, kao i službeni kurikul, ima veliku ulogu u raznim aspektima jer on predstavlja proces u kojemu se učenicima pružaju željena i očekivana uvjerenja i vrijednosti kroz pravila koja reguliraju razne društvene veze i svakodnevni rad koji leže u pozadini iskustava stečenih u školi i razrednom ozračju (Elitok Kesici, Özdemir, Coşkun, 2018, str. 1073).

Skriveni kurikul sadrži, osim ciljeva i aktivnosti koje su jasno navedene u službenom kurikulu, osnovne kvalitete koje su učenici usvojili uz znanje, promišljanje te različite aktivnosti koje se spontano odvijaju u procesu učenja i poučavanja (Yüksel, 2004, str. 10). Skriveni kurikul je školsko okruženje ili školski život koji se nalazi izvan programa i principa koji se svjesno provode u školi (Paykoç, 1995). Dok Ginsburg i Clift (1990) gledaju na skriveni kurikul kao na oblik skrivenih poruka koje se prenose učenicima, Wren (1999) smatra da je skriveni kurikul simbol školske kulture i organizacijske atmosfere nastale kao rezultat interakcije škole i društva. Međutim, Fischer (1977) smatra da skriveni kurikul predstavlja sva obrazovna iskustva u školi koja nisu navedena u službenom kurikulu. Skriveni kurikul je neplanirano iskustvo koje se provodi kroz pravila i odredbe koje se u školi smatraju obvezujućima i konačnima (Çengel, 2013, str. 36).

Skriveni kurikul, koji čini nevidljivi, podvodni dio ledenjaka, ima složenu strukturu. On izlazi na površinu u bitnim trenutcima, kao što su odmori u školi tijekom kojih su učenici izvan roditeljske kontrole, u kojima se druže s vršnjacima igrajući se. Skriveni kurikul može imati i pozitivan i negativan utjecaj na učenike (Yangın i Dindar, 2010). Učinci skrivenoga kurikula nisu vidljivi, ali utječu na eksplicitni kurikul na mnoge načine (Çubukçu, 2012). Iako skriveni kurikul nije uključen u službeni kurikul, on sadrži raznovrsne stavove i ponašanja koji se učenicima donose kroz obrazovanje. Jedan od važnih ciljeva skrivenoga kurikula je oblikovanje učeničkih stavova, osjećaja, navika i vrijednosti društvenoga života. Ti ciljevi obuhvaćaju svjesno ili spontano ponašanje prema nastavnicima, drugim učenicima, ostalom školskom osoblju ili fizičkom okruženju (Elitok Bıçak, Özdemir i Coşkun, 2018, str. 1073-1074). Anderson (2001) je spomenuo da je skriveni kurikul ispiranje mozga ili punjenje informacijama koje omogućava društvene privilegije unutar društva.

Skriveni se kurikul također može prikazati kao proces socijalizacije obrazovanja (Kentli, 2009, str. 83). Kako navodi Dreeben (1968), svako dijete dolazi u školu iz različitih roditeljskih domova, a svi se u školi susreću sa školskim pravilima koja će ih pripremiti za društveni i javni život. Margolis (2001), međutim, tvrdi da su skriveni kurikul, škola i život u razredu reprodukcija školovanja koja im pomaže razumjeti moćnu funkciju škole koja štiti državnu vlast. Kada se skriveni kurikul analizira sa sociološkoga gledišta, može se vidjeti da on igra važnu ulogu u:

– zaštiti kapitalističkoga sustava
– prenošenju dominantnih kulturnih vrijednosti društva učenicima

– procesu socijalizacije učenika te
– pojavljivanju klasnih razlika u društvu (Tuncel, 2008, str. 7-8).

Pojam skrivenoga kurikula može uključiti i detaljnjija objašnjenja korisna nastavnicima kao kreatorima kurikula, nadzornicima te školskoj administraciji jer se školski kurikul može shvatiti kao skup poruka koje šalje školsko osoblje, pogotovo nastavnici. U skladu s tim, nastavnici također imaju važnu ulogu, i za sebe same i za svoje učenike, u promicanju obrazovnih aktivnosti kroz skriveni kurikul (Cornbleth, 1984). Stoga bi sociolozi, nastavnici i birokracija u društvu također trebali biti svjesni ove specifične situacije i voditi računa o funkciji ponašanja i vrijednosti koje se usvajaju kroz skriveni kurikul. Ako se ne ostvari ovakvo partnerstvo, skriveni će kurikul ostati skriven, čak i ako ga uoči određeni dio društva (Çengel, 2013, str. 37).

Pojam skrivenoga kurikula usko je povezan s pojmom profesionalne socijalizacije. Bez obzira o kojemu se fakultetu ili odsjeku radi, čini se da je skriveni kurikul puno učinkovitiji od službenoga kurikula, zato što upravo kroz njega studenti usvajaju stavove i obrasce ponašanja te ispunjavaju ono što se od njih očekuje u procesu profesionalne socijalizacije (Ercan, Yüksel, Özkaya, Ocakoğlu, Yüksel i Uncu, 2009, str. 82). Ipak, činjenica da ti stavovi, obrasci ponašanja te zahtjevi nisu jasno prikazani kao što je slučaj u službenome kurikulu može s vremena na vrijeme izazvati probleme kod studenata, fakultetskoga osoblja i uprave. Stoga je bitno da se puno više pažnje posveti skrivenom kurikulu nego što se to inače radi te da se učini puno više (u pozitivnom ili negativnom smislu) da skrivene poruke procesa učenja i poučavanja budu u skladu s težnjama navedenima u strukturiranom kurikulu (filozofija, očekivanja, ishodi učenja itd.) (Killick, 2016).

Nastavnička profesija nije profesija koja bi se mogla zadovoljiti s ili provoditi samo posjedovanjem određenoga znanja i odgovarajućih vještina. U toj profesiji pojedinci koji se educiraju u skladu s ciljevima društva služe kao primjer društvu svojim stavovima i navikama te obrazuju svoje studente svjesni toga. U skladu s tim, ne može se poreći da su profesionalni stavovi i vrijednosti o kojima budući nastavnici uče na fakultetima obrazovnih znanosti i koje će usvojiti i kroz službeni i kroz skriveni kurikul barem jednako važni kao određena znanja i vještine (Çeliköz i Çetin, 2004, str. 137). Stoga bi nastavnik trebao moći usvojiti sve stavove i obrasce ponašanja koji mogu imati pozitivan utjecaj na studente dodiplomskih studija. Na takve stavove i obrasce ponašanja može utjecati kvaliteta obrazovanja koju fakultet obrazovnih znanosti pruža.

Što su iskustva koja budući nastavnik stječe na fakultetu na kojemu studira pozitivnija, to će taj nastavnik biti pozitivniji i kvalificiraniji za obavljanje nastavničke profesije. Transformacija percepcija budućih nastavnika o skrivenom kurikulu u pozitivne percepcije jako je važna za postizanje boljih obrazovnih rezultata u zemlji (Elitok Bıçak, Özdemir i Coşkun, 2018). Nakon analize relevantne literature, uočen je nedostatak skale skrivenoga kurikula pripremljene posebno za nastavnike ili fakultete obrazovnih znanosti koji educiraju buduće nastavnike u našoj zemlji. Taj je nedostatak uzet kao glavna početna točka u provedbi ovoga istraživanja. Pretpostavlja se da će ono ispuniti

veliku prazninu u tome polju kao alat za prikupljanje podataka u istraživanjima u kojima se određuju percepcije budućih nastavnika o skrivenom kurikulu.

Metode

Ovo istraživanje odobrilo je Etičko povjerenstvo za znanstvena istraživanja Sveučilišta Agri İbrahim Çeçen, uz odluku donesenu 27. siječnja 2021. godine i dokument br. E-95531838-050.99-2403.

Sudionici

Uzorak ispitanika sastojao se od ukupno 430 studenata na trećoj i četvrtoj godini dodiplomskih studija na osam različitih odsjeka jednoga fakulteta obrazovnih znanosti na državnom sveučilištu u Turskoj, tijekom akademske godine 2020./2021., tijekom koje se provodila *online* nastava. Prema mišljenju stručnjaka, studenti na prvoj i drugoj godini dodiplomskih studija koji su studirali na istome sveučilištu nisu bili uključeni u istraživanje, u skladu s pretpostavkom da su još uvijek bili u postupku prilagodbe sveučilišnom okruženju te da nisu mogli potpuno razumjeti kulturu fakulteta ni njegov postojeći skriveni kurikul. Međutim, odgovori nekih studenata nisu uzeti u obzir u istraživanju zbog razloga navedenih u daljnjem tekstu. Stoga je istraživanje provedeno na temelju odgovora dobivenih od 406 studenata nastavničkih studija. Odgovori studenata koji pitanja nisu shvatili ozbiljno, odgovori koji su sadržavali iste opcije odabrane za sva pitanja, nepotpuni odgovori ili oni u kojima nisu sva pitanja odgovorena nisu uzeti u obzir pri analizi.

Pri određivanju uzorka istraživanja korištena je metoda uzorkovanja klastera, koja je jedna od metoda vjerojatnosti uzorkovanja. Uzorkovanje klastera koristi se kada se različite grupe automatski, same od sebe formiraju ili kada se umjetno formiraju zbog raznih razloga u području koje se proučava. Sve te grupe imaju sličnosti u određenim karakteristikama (Neuman i Robson, 2014; Yıldırım i Şimşek, 2018). Sudjelovanje u istraživanju bilo je dobrovoljno. Kako su studenti odabrani na temelju rezultata ispita koje je organizirao Centar za odabir i razredbeni postupak studenata u Turskoj, prihvaćena je pretpostavka da studenti koji studiraju na različitim odsjecima imaju homogenu strukturu grupe zbog sličnih kvalifikacija, karakteristika i uspjeha na svojim odsjecima. Kako je svaki student u grupama koje je kreirao Centar za odabir i razedbeni postupak studenata bio dovoljno kvalificiran da predstavlja svoj odsjek unutar grupe, nije bilo potrebe za pregrupiranjem studenata.

Pri određivanju broja sudionika (u grupnom uzorku), primijenjeno je pravilo „mora biti barem pet puta više sudionika nego tvrdnji" (Tavşancıl, 2019; Child, 2006). Kako je broj tvrdnji na skali bio 29, u istraživanje je bilo uključeno barem pet puta više budućih nastavnika.

Tablica 1.

Kada se analizira Tablica 1, može se vidjeti da je stopa budućih nastavnica koje su sudjelovale u istraživanju (f: 295 = 72,7 %) veća od stope muških sudionika

(f: 111 = 27,3 %). Međutim, može se vidjeti da je u istraživanju sudjelovalo više budućih nastavnika koji su bili na četvrtoj godini studija (f: 222 = 54,7 %).

Tablica 2.

Kada se analizira Tablica 2, može se vidjeti da su budući nastavnici koji studiraju na Odsjeku za razrednu nastavu (f: 83), Odsjeku za nastavu prirodoslovnih predmete (F: 79), Odsjeku za nastavu matematike u osnovnoj školi (f: 75) te Odsjeku za obrazovanje u području društvenih znanosti (f: 67) najviše sudjelovali u istraživanju. Takva se situacija može povezati s upisnim kvotama studenata na ove odsjeke, kao i s dobrovoljnim sudjelovanjem studenata nastavničkih studija u ovome istraživanju.

Izrada tvrdnji na skali i analiza opsega valjanosti skale

Kako bi se izradila odgovarajuća skala, prvo su analizirana ranije provedena istraživanja o skrivenom kurikulumu na nacionalnoj i internacionalnoj razini te je pregledana relevantna literatura (Synder, 1971; Vallance, 1983; Skelton, 1997; Marsh, 1997; Sambell i McDowell, 1998; Acker, Gaır, Margolis i Soldatenko, 2001; Margolis, 2001; Yüksel, 2004; Tietz, 2007; Kentli, 2009; Yangın i Dindar, 2010; Doğanay i Sarı, 2004; Simon i Willinsky, 1980; Kuş, 2009; Türedi, 2008; Tuncel, 2008; Moyse i Porter, 2015; Çengel i Türkoğlu, 2016; Alsubaie, 2015; Akbulut i Aslan, 2016; Lord, 2017).

Nakon toga je izrađena baza od 55 tvrdnji povezanih s temom istraživanja. Pri izradi baze tvrdnji zatraženo je stručno mišljenje kako bi se utvrdila valjanost sadržaja tvrdnji te izdvojili nepotrebni i slični izrazi. U ovoj je fazi procedura izgledala ovako: izrađena je baza od 55 tvrdnji, a zatim je poslana jednom od predavača koji je po prvi put u Turskoj proučavao skriveni kurikul. Ista baza podataka poslana je istovremeno i dvojici predavača i jednom asistentu (jedan od njih je izvanredni profesor, jedan je docent, a jedan je znanstveni suradnik) na Odsjeku za kurikul i nastavu na dva različita sveučilišta.

Na temelju povratnih informacija stručnjaka, odlučeno je da je 20 tvrdnji problematično (zbog sadržaja, ponavljanja, općih izraza itd.) te su stoga uklonjene iz baze tvrdnji. Zatim su tvrdnje pročitali neovisni nastavnici turskoga jezika koji su imali dobru dikciju i gramatičko znanje, čiji je zadatak bio odrediti jesu li tvrdnje problematične u smislu izraza i značenja. Na temelju njihove povratne informacije odlučeno je da postoje 4 takve tvrdnje koje su zbog toga uklonjene iz skale. Zatim, nakon što su napravljene sve potrebne korekcije, provedena je probna primjena skale na 30 studenata nastavničkih studija, kako bi skalu za nastavnike moglo procijeniti barem dvoje studenata nastavničkih studija na svakom odsjeku. Kada su analizirane povratne informacije koje su dali studenti nastavničkih studija, uočeno je da nisu dani odgovori na dvije tvrdnje. Saznalo se da je razlog tomu činjenica da studenti nastavničkih studija nisu mogli potpuno razumjeti dva pitanja pa su ta dva pitanja uklonjena iz skale za nastavnike. Nakon toga na skali je ostalo 29 tvrdnji, a ispitivanje valjanosti i pouzdanosti procesa izrade skale provedeno je na 29 tvrdnji.

Ocjenjivanje je provedeno pomoću skale Likertova tipa od pet stupnjeva u pet kategorija, kako bi se pokazao stupanj slaganja budućih nastavnika s određenim tvrdnjama (5 = u potpunosti se slažem; 4 = slažem se; 3 = niti se slažem, niti ne slažem; 2 = ne slažem se; 1 = uopće se ne slažem). U skalama Likertova tipa, tvrdnje se općenito ocjenjuju u 5 kategorija (Finstad, 2010), a takav način ocjenjivanja korišten je i u ovome istraživanju.

Analiza podataka

Prikupljeni podatci analizirani su pomoću računalnih programa SPSS 22.0 i AMOS. U analizama se prvo koristila eksploratorna faktorska analiza, a zatim i konfirmatorna faktorska analiza. Adekvatnost uzorka izmjerena je pomoću Kaiser-Meyer-Olkinova testa (KMO) i Bartlettova testa u faktorskoj analizi. Za mjerenje pouzdanosti varijabli korišten je Cronbachov alfa koeficijent, koji je mjerio ujednačenost elemenata. Eksploratornom faktorskom analizom određene su poddimenzije i sukladna faktorska opterećenja. U konfirmatornoj faktorskoj analizi korištena je metoda maksimalne vjerodostojnosti. Za ispitivanje pouzdanosti skale izračunati su Cronbachovi alfa koeficijenti za cijelu skalu, a izračunate su i njezine poddimenzije. Osim toga, u SPSS-u korištena je metoda višeslojne umjetne neuronske mreže tijekom konfirmatorne faktorske analize podataka.

Rezultati

Valjanost konstrukata skale

Za određivanje valjanosti konstrukata skale provedene su eksploratorna i konfirmatorna analiza. Faktorska analiza korištena je za otkrivanje dimenzija obilježja koje se željelo mjeriti skalom. Poddimenzije skale izrađene su pomoću faktorske analize.

Eksploratorna faktorska analiza

Pri određivanju broja faktora za eksploratornu faktorsku analizu primijenjeno je pravilo o svojstvenoj vrijednosti većoj od 1, koje je zastupao Kaiser (1960) i koje se u literaturi naziva K1 metodom. U postupku određivanja tvrdnji koje će se uključiti u eksploratornu faktorsku analizu vodilo se računa o tome da svojstvene vrijednosti faktora budu veće od 1 te da su faktorska opterećenja veća od 0,50. Na kraju je prikladnost modela faktorske strukture tvrdnji koja je dobivena eksploratornom faktorskom analizom provjerena i konfirmatornom faktorskom analizom.

Prije svega, u eksploratornoj faktorskoj analizi koja je provedena s ciljem ispitivanja valjanosti konstrukata skale ispitana je matrica korelacije između tvrdnji te se ispitalo postoje li značajne korelacije. Uočeno je da su veze između tvrdnji prikladne za faktorsku analizu. Nakon toga su provedeni Kaiser-Meyer-Olkinov test i Bartlettov test sferičnosti. Kaiser-Meyer-Olkinov omjer usporedbe veličine promatranih koeficijenata korelacije i veličine koeficijenata djelomične korelacije bio je manji od 0,60, a p-vrijednost Bartlettova testa bila je manja od 0,01. To je pokazalo da je set podataka prikladan za analizu glavnih komponenti, kako smatraju neki autori (Büyüköztürk, 2012; SAGE Research Methods Datasets, 2016).

Rezultati Kaiser-Meyer-Olkinova i Bartlettova testa prikazani su u Tablici 3. Uočeno je da je Kaiser-Meyer-Olkinova vrijednost visoka (0,933), a vrijednost Bartlettova testa ($p < 0,01$) bila je prikladna za analizu glavnih komponenti podataka.

Tablica 3.

Faktorska opterećenja upućuju na korelaciju između mjerenih tvrdnji i strukture. Zbog toga su ispitane dimenzije i faktorska opterećenja dobivena analizom glavnih komponenti, a rezultat toga procesa bio je isključivanje iz skale prvo onih tvrdnji koje se nisu uklapale ni u jedan faktor, a zatim i onih koje su uključivale oba faktora (Plotnikoff, 1994). Uočeno je da se tako dobivena struktura sastoji od 29 tvrdnji grupiranih unutar 4 dimenzije. Nakon toga su izračunati koeficijenti unutarnje konzistentnosti za dobivene dimenzije te je uočeno da su vrijednosti Cronbachove alfe 0,950 za cijelu skalu te da variraju između 0,862 i 0,933 kod prvih četiriju faktora.

Krajnji rezultat ovoga procesa, kako se može vidjeti u Tablici 4, bila je konačna verzija skale koja se nakon provedene eksploratorne faktorske analize sastoji od 4 faktora i 29 tvrdnji.

Tablica 4.

Matrica komponenti rotirana pomoći varimax rotacije u faktorskoj analizi prikazana je u Tablici 5, a graf svojstvenih vrijednosti može se vidjeti na Slici 2. Razlog korištenja metode varimax rotacije u faktorskoj analizi jest da se osigura da varijance faktora dobiju najvišu moguću vrijednost s malim brojem varijabli.

Prema rezultatima analize prikazane u Tablici 5, 9 tvrdnji povezano je s faktorom „aktivnost nastavnika", a faktorska opterećenja varirala su u rasponu između 0,652 i 0,810. Relevantni faktor objašnjava 20,72 % ukupne varijance. Drugi faktor na skali, vezan uz pojam „institucija", sastoji se od ukupno 9 tvrdnji. Faktorska opterećenja za relevantni faktor bila su u rasponu od 0,557 i 0,752, a uočeno je ta taj faktor objašnjava 15,455 % ukupne varijance. Treći faktor na skali odnosi se na stavove i sastoji se od ukupno 6 tvrdnji. Faktorska opterećenja tvrdnji povezanih s relevantnim faktorom varirala su između 0,578 i 0,765 te objasnila 13,833 % ukupne varijance. Četvrti faktor na skali sastoji se od pojmova koji se odnose na „aktivnost studenata", a utvrđeno je da se faktor sastoji od ukupno 5 tvrdnji. Relevantni faktor objašnjava 10,347 % varijance. Izračunato je da ova četiri faktora objašnjavaju 60,355 % ukupne varijance.

Tablica 5.

Slika 2.

Konfirmatorna faktorska analiza

Konfirmatorna faktorska analiza provedena je s ciljem testiranja modela dobivenoga eksploratornom faktorskom analizom. Analiza je provedena pomoću strukture od 29 tvrdnji i 300 nasumično odabranih podataka iz uzorka korištenoga u eksploratornoj faktorskoj analizi (N = 406) (Fabrigar, Wegener, MacCallum i Strahan, 1999). Za

konfirmatornu faktorsku analizu korišten je AMOS program, a vrijednosti indeksa prikladnosti dobivene analizom prikazane su u Tablici 6 i modelu na Slici 3. Prije svega, vrijednost dobivena dijeljenjem Hi-kvadrata stupnjevima slobode iznosila je 1,668. Ako je ova vrijednost ispod 5, model je prihvatljiv, a ako je ispod 2, model je dobar (Şimşek, 2007). U ovom kontekstu, dobivena vrijednost pokazuje da je model prihvatljiv.

Osim toga, izračunate su i vrijednosti RMSA (srednje kvadratne pogreške aproksimacije), GFI (indeksa prikladnosti), AGFI (prilagođenoga indeksa prikladnosti), CFI (komparativnoga indeksa prikladnosti) i SRMR (standardiziranoga reziduala srednjega kvadrata). U sklopu preporuka dobivenih AMOS računalnim programom, zatraženo je mišljenje stručnjaka i dopuštena je korelacija između nekih termina pogreške. Nakon toga ponovno su izračunate vrijednosti indeksa prikladnosti te je utvrđeno da su vrijednosti koje su izračunali Hair i sur. (1998), Kline (2011), Raykov i Marcoulides (2006) na odgovarajućoj razini, prema rasponu referentnih vrijednosti navedenih u izvorima.

Tablica 6.

Na kraju je uočeno da su standardizirana faktorska opterećenja, prema izrađenome modelu, varirala između 0,88 i 0,33. Uz to, uočeno je i da između t-vrijednosti nije bilo beznačajne strukture. Kao rezultat toga, dobivena je struktura koja se sastoji od 4 faktora i 29 tvrdnji, na temelju analize provedene tijekom izrade skale. Rezultati analize pokazali su da bi se skala mogla sigurno koristiti u istraživanjima o „skrivenom kurikulu na fakultetima obrazovnih znanosti".

Slika 3.

Nakon provedene konfirmatorne analize podatci su ispitani pomoću umjetne neuronske mreže te je analizirana značajnost tvrdnji (analiza važnosti) za dobivenu strukturu od četiri faktora. U umjetnoj neuronskoj mreži 273 podatka korištena su za edukaciju, 133 podatka za testiranje, a 2 podatka su isključena iz analize jer ih se nije moglo pronaći.

Tablica 7.

U umjetnoj neuronskoj mreži korištena su i dva skrivena sloja. Ulazni podatci sastojali su se od 29 tvrdnji na skali, tj. jedinica. Međutim, izlazni podatci su se sastojali od četiriju poddimenzija izrađenih u skladu s ukupnim rezultatima. Aktivacijska funkcija je bila sigmoidna, i za skriveni i za izlazni sloj. U prvom skrivenom sloju pronađeno je 7 jedinica, dok je u drugom skrivenom sloju pronađeno 5 jedinica. Opća struktura modela prikazana je na slici ispod.

Slika 4.

Sažetak modela umjetne neuronske mreže može se ilustrirati kao na slici. Kao što se vidi, relativne vrijednosti pogreške zavisnih varijabli prema edukaciji i vremenu testiranja mogu se ispitati na sljedeći način:

Tablica 8.

Kada su pregledani rezultati analize značajnosti nezavisne varijable, uočeno je da tvrdnje imaju značajnost veću od 40 %. Stoga se može zaključiti da su tvrdnje u skladu s valjanosti i pouzdanosti skale i da su u skladu s rezultatima konfirmatorne faktorske analize.

Tablica 9.

Kada je provedena analiza pomoću istoga modela umjetne neuronske mreže na temelju svakog podfaktora, uočeno je da su poddimenzije svake dimenzije imale značajnost veću od 50 %, što je bio važan rezultat u smislu valjanosti poddimenzija.

Tablica 10.

Pouzdanost skale

Pouzdanost skale izračunata je pomoću Cronbachove alfa analize unutarnje konzistentnosti. Cronbachov alfa koeficijent za cijelu skalu bio je $\alpha = 0{,}950$, dok je $\alpha = 0{,}933$ pripadao prvoj poddimenziji naziva „profesionalne karakteristike (aktivnost nastavnika)". Koeficijent poddimenzije „sveučilišna obrazovna ustanova" iznosio je $\alpha = 0{,}862$, koeficijent poddimenzije „stavovi" bio je $\alpha = 0{,}869$, dok je koeficijent poddimenzije „aktivnost studenata" bio $\alpha = 0{,}863$. Izračunate vrijednosti prikazane su u Tablici 11.

Tablica 11.

Rasprava

U ovome istraživanju, proces istraživanja izrade skale proveden je kako bi se izradio alat za prikupljanje podataka koji se može koristiti za određivanja skrivenoga kurikula fakulteta obrazovnih znanosti. Provedena je faktorska analiza s ciljem određivanja valjanosti konstrukata skale te je dobiven alat za mjerenje koji se sastoji od 29 tvrdnji i 4 poddimenzije. Prva dimenzija, „aktivnost nastavnika", sastoji se od 9 tvrdnji; druga dimenzija, „institucija", sastoji se od 9 tvrdnji; treća dimenzija, „stavovi" sastoji se od 6 tvrdnji, dok se četvrta dimenzija, „aktivnost studenata", sastoji od 5 tvrdnji. Čini se da je skala izrađena u ovom istraživanju usmjerena na pojam aktivnosti skrivenoga kurikula u ovom kontekstu. „Aktivnost nastavnika" je sposobnost nastavnika da upravljaju svojim profesionalnim razvojem i doprinose rastu svojih kolega na motivirajući i pozitivan način. Umjesto pasivnoga doprinosa mogućnostima za učenje, nastavnici koji su aktivni svjesni su važnosti vlastitoga doprinosa svojem profesionalnom razvoju te žele ostvariti vlastite ciljeve (Calvert, 2016). Aktivnost nastavnika nastaje kada oni žele upravljati ili manipulirati kurikulom kako bi ostvariti željene rezultate. Nastavnici se tada prepoznaju kao spona između službenoga i skrivenoga kurikula (Jenkins, 2019). Kada je skala pregledana, činilo se da faktor „aktivnost nastavnika" ukazuje na važnost aktivnosti nastavnika u tom smislu. Tablica 12 pokazuje važnost aktivnosti nastavnika.

Tablica 12.

Kada su pregledane tvrdnje m49, m55, m50, m53, m51, m54 i m46, uočeno je da odgovornost nastavnika ima veliki utjecaj na obrazovanje u svakome obliku te da daje veliki doprinos dugoročnom osobnom, moralnom i društvenom razvoju. Međutim, tvrdnje m52 i m47 pokazuju da nastavnička profesija nije statična, nego se može mijenjati usporedo s procesom i iskustvom. Tvrdnja m50 pokazuje da se pojedinci na neki način povezuju s masovnim medijima u profesionalnom kontekstu.

Tvrdnje koje su svrstane pod faktor institucije upućuju na to da se struktura, mreža i kultura institucije mogu smatrati značajnim faktorima u skrivenom kurikulu. Barley i Tolbert (1997, str. 96) definiraju institucije kao dijeljena pravila i tipizacije koje prepoznaju kategorije društvenih agenata i njihovih odgovarajućih aktivnosti ili veza. Prema ovoj definiciji, institucije sudjeluju u svakodnevnim aktivnostima tako što određuju vrste agenata i njihove obrasce interakcije koji se ponavljanju i koji su važni za kontekst. Iz njihove perspektive, aktivnost se bezuvjetno formira i provodi unutar strukture i konteksta (Abdelnour, Hasselbladh i Kallinikos, 2017). U tom smilsu, tvrdnje m1, m3, m4, m22, m20, m26, m8, m6 i m2 podržavaju važnost ograničenja strukture, a kontekst institucije ima važnu ulogu u aktivnosti u kontekstu skrivenoga kurikula, kao i u njegovoj kulturi, upravljanju, mehanizmu za pružanje povratnih informacija, karakteristikama pojedinaca, reakcijama, ulaznim informacijama koje se unose u sustav te u fizički i motivacijski prostor i strukturu (Tablica 13).

Tablica 13.

Tvrdnje koje su obuhvaćene faktorom „stavovi" ukazuju na promjenu osobnih stavova pojedinaca u skrivenom kurikulu. Kada su tvrdnje pregledane, uočeno je da su povezane s pozitivnim stavovima, što se može protumačiti kao ograničenje ove skale jer postoje također i negativni stavovi koji se usvajaju kroz skriveni kurikul. Pojedinci su spomenuli Jacksonovu definiciju (1990) u kojoj on navodi da skriveni kurikul pomaže učenicima prilagoditi se stvarnom životu u razredu te ih čini društvenijim bićima (Tablica 15).

Tablica 14

Aktivnost studenata odnosi se na kvalitetu interakcije između studenata i njihove okoline kroz vlastitu samorefleksiju i namjerno djelovanje. Ona uključuje raznoliku konceptualizaciju aktivnosti („moć") i aktivnost („volju") (Klemenčić, 2015). Tvrdnje koje pripadaju faktoru „aktivnost studenata" upućuju na to da studenti također naglašavaju pozitivne dimenzije skrivenoga kurikula i smatraju da on pozitivno djeluje na njihovu aktivnost te se stoga može smatrati drugim ograničenjem ove skale (Tablica 16).

Tablica 16.

Prema rezultatima eksploratorne faktorske analize (EFA), stopa ukupne varijance za cijelu skalu iznosila je 60,355 %. Struktura skale s 4 faktora i 29 tvrdnji dobivenih

eksploratornom faktorskom analizom (EFA) na kraju je testirana konfirmatornom faktorskom analizom (CFA). Uočeno je da se indeksi prikladnosti podataka dobivenih kao rezultat konfirmatorne faktorske analize podudaraju s vrijednostima navedenima u relevantnoj literaturi (Hu i Bentler, 1999).

Analiza važnosti nezavisne varijable pokazala je da tvrdnje imaju važnost veću od 40 %. Stoga se može zaključiti da su tvrdnje prikladne za valjanost i pouzdanost skale, u skladu s konfirmatornom faktorskom analizom. Da je previše tvrdnji imalo važnost od 15 % ili nižu, ili da je samo jedan faktor imao visoku razinu važnosti, a drugi ne, u tom bismo slučaju mogli zaključiti da postoji problem u valjanosti i pouzdanosti skale. Međutim, u ovom slučaju nije uočena posebno asimetrična situacija. Međutim, može se reći da su dimenzije „studenti" i „pojedinci" važniji od dimenzija „profesija" i „sveučilište". U tom kontekstu, ovakvi klasteri se također mogu uzeti u obzir pri analizi. Kako je primjena umjetnih neuronskih mreža relativno nova u području izrade skale u obrazovanju, smatra se da takvi podatci mogu biti jasnije evaluirani u budućim istraživanjima. Upravo takva situacija može upućivati na klasteriranje visokoga stupnja više nego klasična faktorska analiza. Kada se provela analiza pomoću istoga modela umjetne neuronske mreže koji se temelji na svakom podfaktoru, uočeno je da su poddimenzije svake dimenzije pokazale važnost veću od 50 %, što upućuje na činjenicu da podsubdimenzije imaju konzistentnu strukturu.

Kako bi se ispitala pouzdanost skale, provedena je Cronbachova alfa analiza unutarnje konzistentnosti, za sve četiri dimenzije zasebno i za cijelu skalu. Što se tiče izračunatih podataka, poddimenzija „aktivnost nastavnika" imala je vrijednost $\alpha = 0{,}933$; poddimenzija „institucija" imala je vrijednost $\alpha = 0{,}862$; poddimenzija „stav" imala je vrijednost $\alpha = 0{,}869$, poddimenzija „aktivnost učenika" imala je vrijednost $\alpha = 0{,}863$, dok je cijela skala imala vrijednost $\alpha = 950$. Izračunati podatci pokazali su da je Skala skrivenoga kurikula fakulteta obrazovnih znanosti pouzdan mjerni alat.

Zaključak

Bez obzira na fakultet ili odsjek, skriveni kurikul ima puno veći utjecaj na buduću profesiju studenata. Razlog tomu je što studenti moraju steći određene obrasce ponašanja i stavove te udovoljiti zahtjevima kroz skriveni kurikul tijekom faze profesionalne socijalizacije. Nepostojanje skrivenoga kurikula posebno pripremljenoga za nastavnike ili ustanove koje obrazuju buduće nastastavnike u našoj zemlji bilo je početna točka za pokretanje ove analize tijekom proučavanja literature o toj temi. Istraživanje je popunilo veliku prazninu u tom području kako bi se ispitala stajališta budućih kandidata o skrivenom kurikulu.

Rezultati pokazuju da je Cronbachov alfa koeficijent za cijelu skalu 950. Kada su pregledani rezultati analize značajnosti nezavisne varijable, uočeno je da tvrdnje imaju značajnost veću od 40 %. Stoga se može zaključiti da su tvrdnje prikladne za valjanost i pouzdanost skale i u skladu s konfirmatornom faktorskom analizom. Nakon provedene analize korištenjem istoga modela umjetne neuronske mreže na temelju svakoga

podfaktora, uočeno je da su poddimenzije svake dimenzije pokazale značajnost veću od 50 %, što upućuje na to da podsubdimenzije imaju konzistentnu strukturu. Analiza valjanosti i pouzdanosti Skale skrivenoga kurikula fakulteta obrazovnih znanosti pokazala je da je skala uistinu valjana i pouzdana za buduće nastavnike.

Može se vidjeti da su aktivnost nastavnika, uloga institucija kao ograničavajućih faktora, stavovi te aktivnost studenata važni faktori u skrivenom kurikulu. Stoga, kada govorimo o unaprjeđivanju aktivnosti nastavnika i ulozi institucija u kontekstu skrivenoga kurikula, mogu se dati sljedeće preporuke:

– planirati organizaciju školskoga dana tako da nastavnici imaju priliku za čestu interakciju i rad s kolegama kako bi unaprijedili proces poučavanja i učenja

– uključiti nastavnike u analizu podataka i prepoznavanja problema u učenju i poučavanju

– osnovati grupe za učenje u kojima nastavnici razgovaraju o izazovima s kojima se susreću u praksi i osjećaju se zaslužnima za napredak kolega i studenata

– dati nastavnicima mogućnost izbora suradnika i onoga na čemu će temeljiti svoje usavršavanje tijekom karijere

– voditi računa o tome da se napredak koristi za stalna poboljšanja, a ne za ocjenjivanje

– odoljeti pokušaju da se proširi ili zahtijeva određeni oblik obrazovanja za buduće zanimanje a da se prethodno detaljno ispita okvir u kojemu bi se takvo obrazovanje provodilo.

Ostali faktori upućuju na to da bi se skale koje uključuju negativne dimenzije trebale uključiti u buduće skale koje će se izraditi vezano za skriveni kurikul u dimenzijama „stavovi" i „aktivnost studenata".