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RESEARCH ARTICLE

Adaptation of the School Readiness Scale to Kosovan Culture: Validity and Reliability Analysis

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ABSTRACT

This study aimed to adapt a teacher assessment scale for measuring the school readiness levels of first-grade students in Kosovar Turkish language education, aligning it with Kosovar culture. The original scale, consisting of 33 items, was applied to teachers working in Turkish language education in Kosovo and primary school students receiving education in this language. The collected data were analyzed using statistical software, and the results of Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were examined.

During the adaptation process, the scale was reduced to 25 items, resulting in a four-factor model: School Readiness Skills, School Adjustment and Development Skills, Social Interaction and Cognitive Organization Skills, School Culture Adjustment and Cognitive Understanding Skills.

The CFA results indicated that the scale's fit indices were at acceptable levels, demonstrating compatibility between the model and the data. Additionally, the removal of certain items enhanced the homogeneity of the factors and strengthened the reliability of the scale.

This study contributes to the scale development and adaptation literature by providing a valid and reliable measurement tool applicable to different cultural contexts. Future studies are recommended to apply the scale to various ethnic and demographic groups in Kosovo to evaluate its generalizability. This is expected to further enhance the scale's validity and reliability across diverse cultural and demographic settings.

School readiness is a significant concept that defines the abilities, knowledge, skills, and behaviors children need to possess before entering an educational institution. This concept encompasses a combination of various factors that influence a child's capacity to adapt to school and their likelihood of succeeding academically (Blair & Raver, 2015). School readiness requires consideration not only of academic knowledge but also of the child's overall developmental stages. Thus, cognitive, emotional, social, and physical development are all regarded as crucial determinants of school readiness (Acar, 2020). Educators and families must carefully develop and implement various methods to enhance children's readiness for school. By acting with this awareness, the goal is to enable children to have a healthier, more peaceful, and successful start to their school life. Therefore, preparing children for school has become a critical concern for all stakeholders, from educators to families. A smooth and positive school transition plays a decisive role in shaping children's future academic and social lives (Acar et al., 2021).

School readiness effectively captures the state of being equipped with academic and social skills at the moment a child begins school. These skills, which include language and communication,

numerical abilities, problem-solving, social interaction, and organized behavior, are vital in determining the child's level of success in their educational journey. Possessing these skills significantly facilitates children's ability to adapt to school and socialize effectively. As an essential factor influencing a child's capacity to adapt to school, school readiness is carefully prioritized within the education system. This process contributes to increased self-confidence, academic success, and social skills development. The attention paid by educators and families to this matter can directly impact children's future achievements (Orhan, 2020).

Insufficient school readiness can negatively affect a child's school performance and lead to adjustment issues. Therefore, supporting and evaluating school readiness during the preschool period is of great importance (Gümüştaş & Gülbahar, 2022; Güder et al., 2023).

The purpose of this study is to examine the school readiness of students in Kosovo and evaluate the process of scale adaptation. Understanding how students organize themselves for their educational lives and the methods they employ to prepare is a key focus of this research. Additionally, determining the validity of the scale adaptation process is a critical component of this study. The research aims to comprehensively address the challenges and validity issues encountered during the scale adaptation process in the context of Kosovo. It emphasizes the difficulties students face in their developmental processes and seeks solutions to overcome these challenges. Furthermore, this study aims to contribute to identifying strategies to enhance student success.

METHOD

Purpose

This study addresses the process of adapting a school readiness scale and its validity issues for students in Kosovo. It employs a quantitative research approach to evaluate the scale adaptation process. The primary methodological focus is analyzing the impact of the adaptation process on the Kosovan education system and assessing students' readiness for school.

Data Collection Tool

The original Turkish version of the scale was directly used since the study involved teachers who teach in Turkish.

Sample

The scale was administered to first-grade teachers in the Kosovan Turkish education system in September of the 2024-2025 academic year. Each teacher completed the scale separately for each student.

Data Analysis

The study utilized **Exploratory Structural Equation Modeling (ESEM)** (Alamer, 2022; Asparouhov & Muthén, 2009; Frontini et al., 2022) to examine the construct validity of the scale and **Latent Profile Analysis (LPA)** to identify students' readiness profiles. ESEM was chosen due to the small sample size and the presence of cross-loadings between items and subdimensions of the scale (Marsh et al., 2014).

Before the analysis, data cleaning and quality checks were conducted. For ESEM, the "TargetQ" rotation method was used, and the model was tested while adhering to the original structure of the scale. The model fit was evaluated using **CFI**, **TLI**, **SRMR**, and **RMSEA** indices, based on the criteria proposed by Hair et al. (2010):

- **CFI and TLI**: > .95 for excellent fit
- **SRMR and RMSEA**: < .08 for good fit

The reliability of the factors was assessed using **McDonald's ω coefficient**, preferred over Cronbach's alpha due to its reliability and lack of reliance on the tau-equivalence assumption (Dunn et al., 2014).

To classify students based on their readiness levels, **Latent Profile Analysis (LPA)** was employed. LPA, unlike traditional clustering methods, provides a model-based approach and accounts for classification error (Nylund-Gibson, 2004; Nylund-Gibson & Choi, 2018). To determine the optimal number of classes, multiple model comparisons were conducted, considering the following criteria:

- Information criteria (**AIC**, **BIC**, **SABIC**)
- Entropy value
- Integrated Classification Likelihood (ICL) index
- Model complexity and interpretability

The quality of class separation in each model was assessed using the entropy value, with values above 0.80 indicating good separation (Tein et al., 2013). Models with lower BIC and SABIC values and higher entropy were preferred.

Software and Packages

The analyses were conducted using **RStudio** (RStudio Team, 2024). For ESEM, the 'esem' package (Prokofieva et al., 2023) was utilized, while the 'tidyLPA' package (Rosenberg et al., 2019) was employed for LPA. The 'fmsb' package was used for graphical representations and visualizations.

FINDINGS

The model in **Figure 1** was tested while adhering to the original structure of the scale. Solid black lines represent theoretically established relationships between factors and items. Dashed lines represent relationships identified through ESEM, which were constrained or minimized to improve the model fit.

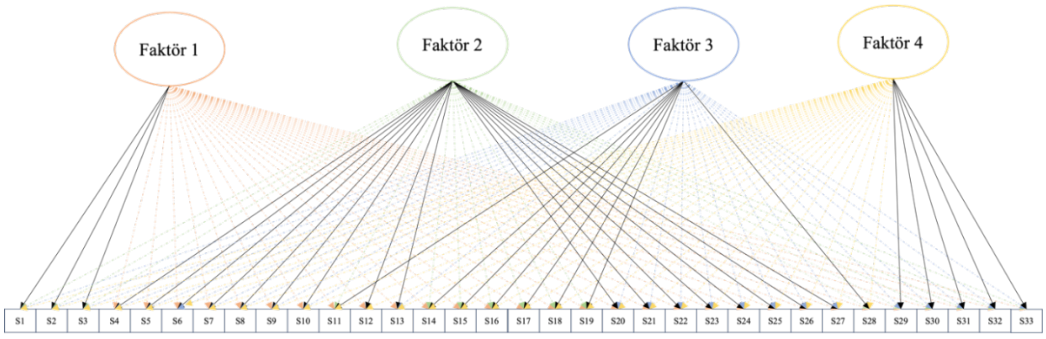

Figure 1. Factor-Item Relationship

The target structure was established, and ESEM was applied, with "TargetQ" chosen as the rotation method. The model yielded CFI (0.996), TLI (0.995), SRMR (0.062), and RMSEA (0.080; 90% CI: 0.074-0.086), which fall within acceptable limits. However, some items (e.g., s12) were observed to have negative specific variance. Consequently, these items (s12, s21, s30, s31, s27, s14, s15, and s33) were sequentially removed, and the model was re-tested repeatedly. The resulting fit indices are presented in Table 1.

Table 1. ESEM Model Fit Indices

Indices	Criter ()	Value
CFI	> .95 very good	0.997
TLI	> .95 very good	0.995

SRMR	< 0.08 good	0.058
RMSEA	< 0.08 good	0.069 (%90 GA: 0.060-0.078)

According to the criteria suggested by Hair et al. (2010), CFI and TLI are in excellent condition. SRMR and RMSEA are in good condition. When evaluated in this context, it can be stated that the data are in harmony with the model that was developed. Since stronger factor loadings were formed between the items and factors, the factor structure and factor names were re-examined. Some items (s1, s5, s13, s17) were selected as reference indicators, and therefore, standard errors were not calculated for them.

Table 2. Item Loadings for Factor 1 "School Readiness Skills"

Items	Estimate	Std.Err	z-value	P(>|z|)	ci.lower	ci.upper
s1	0.587					
s2	0.861	0.229	3.765	.000	0.413	1.31
s3	0.714	0.179	3.989	.000	0.363	1.064
s4	0.295	0.079	3.724	.000	0.14	0.451
s5	0.222					
s6	0.688	0.189	3.648	.000	0.318	1.057
s7	0.248	0.089	2.793	0.005	0.074	0.422
s8	0.688	0.202	3.399	0.001	0.291	1.085
s9	-0.119	0.15	-0.793	0.428	-0.413	0.175
s10	0.208	0.089	2.325	0.02	0.033	0.383
s11	-0.194	0.191	-1.015	0.31	-0.57	0.181
s13	0.041					
s16	0.040	0.175	0.227	0.82	-0.303	0.383
s17	0.215					
s18	0.012	0.132	0.088	0.93	-0.247	0.27
s19	0.514	0.182	2.828	0.005	0.158	0.871
s20	-0.468	0.238	-1.966	0.049	-0.935	-0.001
s22	-0.135	0.155	-0.871	0.384	-0.438	0.168
s23	-0.698	0.365	-1.911	0.056	-1.414	0.018
s24	-0.765	0.391	-1.953	0.051	-1.532	0.003
s25	-0.632	0.336	-1.882	0.06	-1.291	0.026
s26	0.064	0.077	0.831	0.406	-0.087	0.216
s28	0.091	0.105	0.867	0.386	-0.115	0.298
s29	0.078	0.094	0.832	0.406	-0.106	0.263
s32	0.298	0.132	2.253	0.024	0.039	0.557

When the structure of Factor 1 was examined, it was found that the items that most strongly explained the factor were: "Performed specific movements requiring hand-eye coordination (e.g., paper folding, cutting, gluing, connecting dots to create new shapes)" (s2) (0.861), "Held a pencil without difficulty" (s3) (0.714), "Had a sufficient vocabulary for learning" (s6) (0.688), "Read visual materials (e.g., creating stories from pictures)" (s8) (0.688), and "Followed rules in different environments (e.g., saying thank you, requesting politely, apologizing, waiting in line, showing patience)" (s19) (0.514) (Table 2). These items were statistically significant and showed factor loadings above 0.30. Additionally, "Moved in rhythm with music" (s4) (0.295), "Understood the meaning of a text or story read by the teacher" (s7) (0.248), "Introduced family members' characteristics" (s10) (0.208), and "Followed cleaning rules" (s32) (0.298) were statistically significant but showed relatively lower factor loadings. On the other hand, "Counted objects up to 20" (s20) (-0.468) showed a significant negative relationship. When the item statements were examined, the factor could be named "School Readiness Skills."

On the other hand, items s9, s11, s16, s18, s22, s23, s24, s25, s26, s28, and s29 showed statistically insignificant factor loadings (p>0.05). Particularly, items s23 (-0.698), s24 (-0.765), and s25 (-0.632) showed high negative loadings, but these loadings did not reach statistical significance. When confidence intervals were examined, it was observed that the confidence intervals of the items with significant factor loadings did not contain 0. The widest confidence interval was observed for item s23 (-1.414, 0.018), while the narrowest confidence interval was for item s4 (0.140, 0.451). These results indicate that Factor 1 has a strong and consistent relationship with some items, while the relationship with other items is weak or uncertain.

Tablo 3. Factor 2 "School Adjustment and Development Skills" Item Loadings

Items	Estimate	Std.Err	z-value	P(>|z|)	ci.lower	ci.upper
s1	-0.111					
s2	-0.17	0.276	-0.614	0.539	-0.712	0.372
s3	0.006	0.228	0.027	0.979	-0.441	0.453
s4	0.388	0.093	4.164	0	0.205	0.571
s5	0.223					
s6	0.102	0.235	0.436	0.663	-0.358	0.562
s7	0.61	0.107	5.682	0	0.4	0.82
s8	0.213	0.24	0.885	0.376	-0.259	0.684
s9	1.059	0.171	6.184	0	0.723	1.395
s10	0.822	0.108	7.611	0	0.61	1.034
s11	0.922	0.21	4.384	0	0.51	1.334
s13	0.931					
s16	0.309	0.198	1.562	0.118	-0.079	0.697
s17	-0.002					
s18	0.409	0.156	2.627	0.009	0.104	0.715
s19	-0.408	0.218	-1.873	0.061	-0.836	0.019
s20	1.285	0.293	4.384	0	0.71	1.859
s22	0.828	0.174	4.753	0	0.486	1.169
s23	0.95	0.418	2.27	0.023	0.13	1.77
s24	1.295	0.457	2.831	0.005	0.398	2.191
s25	1.24	0.392	3.16	0.002	0.471	2.008
s26	0.771	0.094	8.229	0	0.587	0.955
s28	0.536	0.107	5.036	0	0.328	0.745
s29	0.571	0.1	5.709	0	0.375	0.767
s32	0.002	0.15	0.012	0.99	-0.292	0.296

When examining the structure of Factor 2, the items that most strongly explain this factor are s20 (1.295), s24 (1.295), s25 (1.240), s9 (1.059), s23 (0.950), s13 (0.931), s11 (0.922), and s10 (0.822) (Table 3). These items are statistically significant (p<0.05) and show high factor loadings. Items with moderate factor loadings include s22 (0.828), s26 (0.771), s7 (0.610), s29 (0.571), s28 (0.536), and s18 (0.409). These items also demonstrate statistically significant loadings. Upon examining the item statements, cognitive skills, academic prerequisites, and socio-emotional skills emerge as prominent factors. Therefore, the second factor can be named "School Adjustment and Development Skills."

On the other hand, the items s2 (-0.170), s3 (0.006), s6 (0.102), s8 (0.213), s16 (0.309), s19 (-0.408), and s32 (0.002) show factor loadings that are not statistically significant (p>0.05). When examining the confidence intervals, it is observed that the confidence intervals for the items with significant factor loadings do not include 0. The widest confidence interval is found for item s24 (0.398, 2.191), while the narrowest is for item s4 (0.205, 0.571). Particularly noteworthy is that many items show factor loadings above 1, and these loadings are statistically significant. This indicates that Factor 2 exhibits a strong structure and is well represented by several items.

Table 4. Factor 3 "Social Interaction and Cognitive Organization Skills" Item Loadings

Items	Estimate	Std.Err	z-value	P(>|z|)	ci.lower	ci.upper
s1	0.36					
s2	0.081	0.077	1.058	0.29	-0.069	0.232
s3	0.286	0.062	4.584	0	0.164	0.408
s4	0.212	0.051	4.188	0	0.113	0.312
s5	0.652					
s6	0.249	0.065	3.82	0	0.121	0.377
s7	-0.139	0.053	-2.599	0.009	-0.244	-0.034
s8	-0.129	0.074	-1.755	0.079	-0.274	0.015
s9	0.082	0.055	1.505	0.132	-0.025	0.189
s10	-0.204	0.065	-3.122	0.002	-0.332	-0.076
s11	0.369	0.048	7.631	0	0.274	0.464
s13	-0.279					
s16	0.659	0.057	11.664	0	0.549	0.77
s17	0.349				0.349	0.349
s18	0.304	0.04	7.632	0	0.226	0.382
s19	0.734	0.086	8.511	0	0.565	0.903
s20	-0.152	0.073	-2.091	0.036	-0.295	-0.01
s22	0.239	0.044	5.417	0	0.152	0.325
s23	0.52	0.076	6.824	0	0.371	0.669
s24	0.583	0.091	6.437	0	0.406	0.761
s25	0.428	0.078	5.501	0	0.275	0.58
s26	-0.29	0.05	-5.861	0	-0.387	-0.193
s28	0.325	0.037	8.876	0	0.253	0.397
s29	0.205	0.039	5.199	0	0.128	0.282
s32	0.232	0.056	4.163	0	0.123	0.342

When examining the structure of Factor 3, the items that most strongly explain this factor are s19 (0.734), s16 (0.659), and s5 (0.652) (Table 4). Following these, items s24 (0.583), s23 (0.520), s25 (0.428), s11 (0.369), and s17 (0.349) show medium-level and statistically significant factor loadings. Additionally, items s28 (0.325), s18 (0.304), s3 (0.286), s6 (0.249), s22 (0.239), s32 (0.232), and s29 (0.205) also exhibit low but significant factor loadings. When examining the items of the third factor, the skills demonstrated by the student in both social and cognitive areas on the first days of school are prominent. Therefore, it can be defined as "Social Interaction and Cognitive Organization Skills."

Some items in the factor show negative and statistically significant relationships. These include s26 (-0.290), s10 (-0.204), s20 (-0.152), and s7 (-0.139). This indicates that these items have an inverse relationship with the factor. When examining the confidence intervals, it is observed that the confidence intervals of the items with significant factor loadings do not include 0. The widest confidence interval is found for item s24 (0.406, 0.761), and the narrowest confidence interval is observed for item s29 (0.128, 0.282). Items s2, s8, and s9 show statistically insignificant factor loadings ($p>0.05$). These results indicate that Factor 3 shows consistent and significant relationships with certain items, while showing inverse relationships with others.

Table 5. Factor 4 "Adaptation to School Culture, Cognitive Understanding Skills" Item Loadings

Items	Estimate	Std.Err	z-value	P(>|z|)	ci.lower	ci.upper
s1	-0.017					
s2	0.564	0.178	3.178	0.001	0.216	0.912
s3	0.164	0.147	1.116	0.265	-0.124	0.451
s4	0.135	0.058	2.318	0.02	0.021	0.25
s5	-0.497					

s6	0.046	0.149	0.31	0.756	-0.245	0.338
s7	0.35	0.07	5.035	0	0.214	0.486
s8	0.309	0.146	2.115	0.034	0.023	0.595
s9	-0.247	0.12	-2.05	0.04	-0.483	-0.011
s10	-0.174	0.087	-2.002	0.045	-0.344	-0.004
s11	-0.044	0.14	-0.317	0.751	-0.319	0.23
s13	-0.021					
s16	-0.466	0.12	-3.886	0	-0.7	-0.231
s17	0.666					
s18	0.255	0.095	2.677	0.007	0.068	0.442
s19	0.353	0.153	2.315	0.021	0.054	0.652
s20	-0.391	0.192	-2.031	0.042	-0.768	-0.014
s22	0.01	0.112	0.088	0.93	-0.209	0.229
s23	0.168	0.24	0.701	0.483	-0.302	0.639
s24	-0.387	0.283	-1.369	0.171	-0.941	0.167
s25	-0.329	0.255	-1.288	0.198	-0.829	0.172
s26	0.309	0.064	4.864	0	0.184	0.433
s28	0.248	0.069	3.617	0	0.114	0.383
s29	0.21	0.067	3.147	0.002	0.079	0.341
s32	0.888	0.098	9.013	0	0.695	1.081

Upon examining the structure of Factor 4, it is observed that the strongest factor loadings are shown by items s32 (0.888) and s17 (0.666). Following these, item s2 (0.564) also demonstrates a strong and statistically significant loading. Items showing medium factor loadings include s19 (0.353), s7 (0.350), s26 (0.309), s18 (0.255), s28 (0.248), and s29 (0.210). All of these items show statistically significant loadings ($p<0.05$). When the item statements related to the factor are evaluated, the fourth factor encompasses both cognitive/language understanding and motor skills, as well as adherence to social rules and self-care (cleanliness) skills. Therefore, the fourth factor can be labeled as "Adaptation to School Culture, Cognitive Understanding Skills."

Notably, some items in the factor show negative and significant relationships. Specifically, items s16 (-0.466), s5 (-0.497), s20 (-0.391), s9 (-0.247), and s10 (-0.174) exhibit reverse and significant relationships with the factor. When examining the confidence intervals, the widest confidence interval is observed for item s2 (0.216, 0.912), and the narrowest confidence interval is for item s4 (0.021, 0.250). Some items (s3, s6, s11, s22, s23, s24, s25) show statistically insignificant factor loadings ($p>0.05$). These results reveal that Factor 4 shows strong positive relationships with certain items, significant negative relationships with some, and no meaningful relationship with a group of items. The new item-scale relationship based on the results of AYEM is presented in Figure 2.

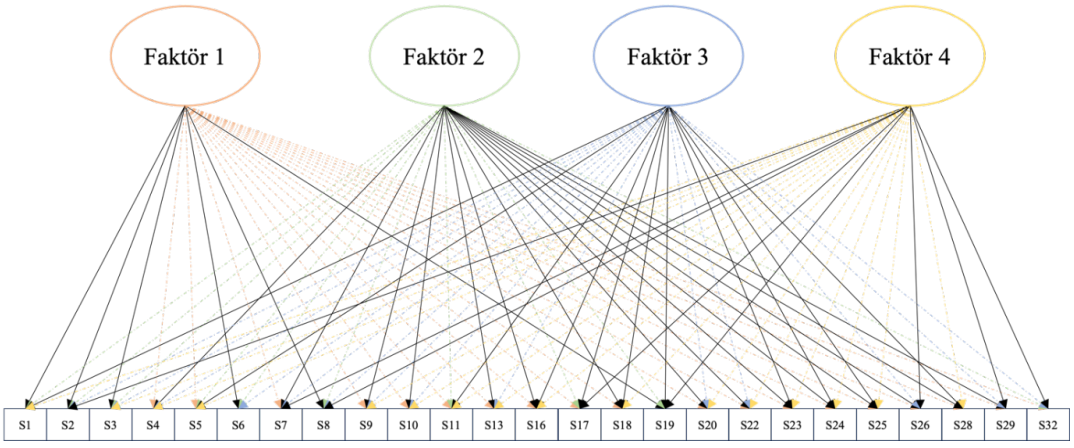

Figure 2. Item-Factor Relationships Based on AYEM Results

Table 6. Reliability Coefficients

Factors	McDonald's ω
ML1	0.840
ML2	0.938
ML3	0.873
ML4	0.855

The ML2 factor has the highest internal consistency reliability with a value of 0.938, indicating excellent reliability ($\alpha > 0.90$). The ML3 factor shows very good reliability with a value of 0.873. The ML4 factor (0.855) and the ML1 factor (0.840) both demonstrate good reliability, with alpha values between 0.80 and 0.90 ($0.80 < \alpha < 0.90$).

Table 7. Mean and Standard Deviation for the Factors.

Factors	Mean	SS
ML1	3.919	0.763
ML2	3.264	0.990
ML3	3.991	0.764
ML4	3.801	0.818

"ML3 has the highest mean (M=3.99, SD=0.76). This result indicates that students perform better in the social interaction and cognitive organization skills dimension compared to other dimensions, and the class average is significantly higher. ML1 (Fine Motor Skills) has the second-highest mean (M=3.92, SD=0.76). The distribution in this factor suggests that students' school readiness skills are also at a high level, and the variation among students is similar to that of ML3. The ML4 factor (M=3.80, SD=0.82) ranks third. This result shows that students' school culture adaptation and cognitive understanding skills are above average, but the differences among students are slightly more pronounced. ML2 has the lowest mean (M=3.26, SD=0.99) and the highest standard deviation. This indicates that school adaptation and development skills are at a lower level compared to other skills, and the differences among students in this dimension are more evident. Overall, the means of all factors are above 3, indicating that students' overall readiness levels are above average. However, especially in the ML2 dimension, there are larger differences among students, suggesting that some students may need more support in this area."

Latent Profile Analysis

Table 8. Fit Indices for Latent Profile Analysis Models

Model	Classes	LogLik	AIC	AWE	BIC	CAIC	CLC	KIC	SABIC	ICL	Entropy
1	2	-912	1851	2004	1896	1909	1827	1867	1855	-1903	0.957
1	3	-734	1504	1716	1566	1584	1470	1525	1509	-1572	0.976
1	4	-690	1426	1697	1505	1528	1382	1452	1432	-1515	0.967
1	5	-636	1327	1658	1424	1452	1273	1358	1335	-1436	0.959
1	6	-601	1269	1659	1383	1416	1205	1305	1278	-1401	0.953
3	2	-708	1453	1677	1519	1538	1417	1475	1458	-1521	0.983
3	3	-625	1299	1582	1381	1405	1253	1326	1305	-1384	0.983

3	4	-591	1240	1583	1340	1369	1184	1272	1248	-1346	0.976
3	5	-536	1141	1543	1258	1292	1075	1178	1150	-1271	0.953
3	6	-531	1141	1602	1275	1314	1065	1183	1151	-1298	0.923

In the selection of the Latent Profile Analysis (LPA) model, information criteria such as AIC, BIC, and SABIC, along with entropy and ICL, are considered (presented in Table 3). Lower AIC, BIC, and SABIC values indicate better fit, while higher entropy shows that the classes are well separated. In Model 1, although the BIC and other criteria improve as the number of classes increases, entropy decreases to a low level. This indicates that increasing the number of classes in Model 1 provides limited benefit. In Model 3, from 2 to 5 classes, there is a significant improvement in indices such as BIC, SABIC, and ICL, but at 6 classes, these values worsen again. The 5-class solution has both the lowest BIC and SABIC values, and it maintains a good separation level of the classes with entropy (0.953). The 5-class solution of Model 3 stands out as the most suitable model based on fit indices and entropy values.

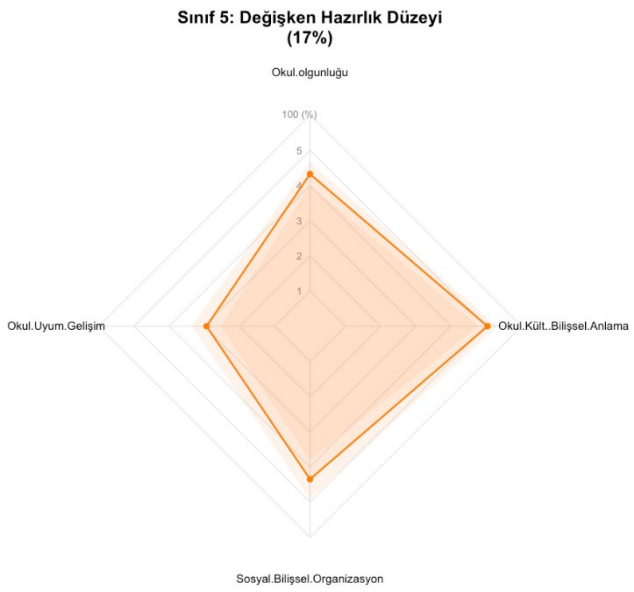

Figure 2. Development Radar Chart by Class

High Preparedness Level Group: This group represents 30% of all students. It is the largest group in the study and exhibits the strongest profile in terms of school readiness. The students in this group have high average scores ranging from 4.57 to 4.63 across all skill areas, with median values between 4.75 and 4.83. The relatively low standard deviation values (ranging from 0.47 to 0.52) indicate that the students in this group have similar skill levels. These students perform at a high level in school readiness, adjustment, social interaction, and problem-solving skills, and appear to have all the necessary skills to start school.

Medium-High Preparedness Level Group: This group comprises 26% of all students, making it the second-largest group. Students in this group show a strong profile, particularly in school readiness (4.11) and social interaction-cognitive organization (4.08) areas. However, their performance in school adjustment and development skills (2.60) and school culture adjustment-problem-solving skills (3.29) is lower. The low standard deviation values (ranging from 0.22 to 0.32) indicate a high degree of homogeneity within the group. These students are strong in certain areas but may require support in adjusting to school.

Variable Preparedness Level Group: This group represents 17% of all students. The students in this group display a variable performance profile across different skill areas. While they perform well in school culture adjustment and problem-solving skills (4.23), and at a good level in social interaction skills (3.68), their performance in school adjustment and development skills (2.55) is lower. The relatively low standard deviation values (ranging from 0.21 to 0.45) suggest that this variable profile is consistent within the group. These students should be supported in developing school adjustment skills while maintaining their strengths in other areas.

Socially Strong Low Preparedness Group: This group represents 11% of all students and is the smallest group. Students in this group show good performance in social interaction and cognitive organization skills (4.19), but perform below average in other areas. They show low to moderate performance in school readiness (3.17), school adjustment (2.96), and school culture adjustment (3.01). The low standard deviation values (ranging from 0.25 to 0.39) indicate that these profile characteristics are consistent within the group. It is important to support these students in areas other than social skills while maintaining their strengths.

Low Preparedness Level Group: This group represents 15% of all students. Students in this group have the lowest average scores across all skill areas (ranging from 2.82 to 3.20). Notably, the standard deviation values are quite high (ranging from 0.84 to 0.97) across all areas. This indicates that there is significant variation in the performance of students in this group, and the group shows high heterogeneity. The minimum values of 1.00 suggest that some students are in need of significant support. A comprehensive intervention program should be developed for this group, with support provided while considering individual differences.

CONCLUSION AND RECOMMENDATIONS

The purpose of this study was to adapt a teacher assessment scale for measuring the school readiness levels of first-grade students in Kosovar Turkish language education, suitable for the Kosovar culture. The original scale, consisting of 33 items, was applied to a participant group consisting of teachers working in Turkish education in Kosovo and primary school students receiving education in this language. The data collected during the implementation process were analyzed using statistical software. As a result of adapting the scale to the Kosovar culture, the scale was reduced to 25 items, and a four-factor measurement tool was obtained through Exploratory Factor Analysis (EFA). In this study, based on the results of Confirmatory Factor Analysis (CFA), which was conducted while adhering to the structure of the original scale (Canbulat, T. & Kiriktaş, H. 2016), a four-factor model was proposed, and the factor loadings of each factor were examined. The findings largely support the intended structure of the scale. However, some items were removed from the model due to negative specific variance or non-significant factor loadings. As a result, the scale's fit indices (CFI, TLI, SRMR, and RMSEA) were found to be at acceptable levels, indicating that the model is compatible with the data (Büyüköztürk, Ş. 2018), (Tabachnick, B. G., & Fidell, L. S. 2019).

In the process of naming the factors, the content of the items was considered, leading to the following results:

Factor 1: School Readiness Skills. This factor includes skills developed by students since the preschool period, such as motor skills, basic academic prerequisites, and adherence to rules. Items such as s2, s3, s6, s8, and s19 have the highest factor loadings and form the core components of this factor.

Factor 2: School Adjustment and Development Skills. This factor reflects students' cognitive and socio-emotional adjustment skills. Items with high factor loadings (e.g., s20, s24, s25) indicate students' ability to adapt to school rules, meet cognitive prerequisites, and succeed in social relationships.

Factor 3: Social Interaction and Cognitive Organization Skills. This factor reflects students' ability to interact with their social environment and their cognitive organizational skills. Items such as s19, s16, and s5 have the highest factor loadings, although some items show a negative relationship with the factor.

Factor 4: School Culture Adjustment and Cognitive Understanding Skills. This factor expresses students' adaptation to school culture and cognitive understanding skills. Items such as s2, s7, and s8 are among the strong components of this factor. However, some items, such as s9, s10, and s16, exhibited negative or non-significant loadings.

In conclusion, the overall structure of the scale largely overlaps with the intended four-factor model. However, the removal of certain items resulted in a more homogeneous structure for the factors. This has led to more reliable and valid results in the application context. The scale's fit indices (CFI, TLI, SRMR, and RMSEA) were found to be at acceptable levels, supporting the construct validity of the scale.

Similarly, in other studies in the literature (Kartal & Güleç, 2018; Büyüköztürk, 2018), it has been stated that removing some items during the scale development and adaptation processes contributes to better defining the scale structure and improving the model fit.

Additionally, based on the methods recommended by Büyüköztürk (2018) and Tabachnick & Fidell (2019) in scale development processes, the item reduction process, based on CFA results, positively impacted the internal consistency and validity values of the scale. In this context, the results of this study provide new support for the scale development literature, contributing to the more effective use of the scale.

Future studies are recommended to apply the scale to different sample groups and ethnic groups living in Kosovo and evaluate the generalizability of the results. This is expected to increase the scale's validity and reliability in different cultural and demographic contexts.

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