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ABSTRACT

In this study, it was aimed to develop scales to measure the resistance of Vocational High School students to lessons. Within the scope of the study, two separate scales were developed for vocational and common courses in Vocational High Schools. Exploratory Factor Analysis (EFA) for scale validity was carried out with the first study group and Confirmatory Factor Analysis (CFA) was carried out for the factor structure obtained from EFA with the second study group. The results were reported separately for both scales.

Three factors were obtained as a result of EFA in the first study group. The variance ratio explained by three factors indicates that both scales are suitable in terms of construct validity. For scale of vocational courses, Cronbach's Alpha coefficient for "Claim for Autonomy" factor was 0.95, for "Finding Excuses" was 0.93, for "Avoidance" was 0.93, and the reliability coefficient for the whole scale was 0.97. For scale of common courses, Cronbach Alpha coefficient for the "Claim for Autonomy" was 0.94, for the "Finding Excuses" was 0.96, for "Avoidance" was 0.95, and the reliability coefficient obtained for the whole scale was 0.98. These results are proof that the reliabilities of both scales are high. When the fit index values for both scales obtained from CFA based on the data of the second study group are examined, it was seen that the three-factor student resistance scale for vocational and common courses has a valid and reliable structure. The CFA results has also shown that the models are compatible.

Keywords: Student resistance, vocational high school, vocational courses, common courses, scale

INTRODUCTION

The student's attitudes and behaviors towards the learning process are of great importance in the efficient execution of the learning-teaching process in line with the specified goals. "Resistance", which is expressed as learning or student resistance in the literature, is used to explain and interpret various student behaviors in educational research (Alpert, 1991). In an ideal learning process, the student is expected to take responsibility for his own learning and to cooperate with the teacher, while resistance to educational activities leads the student to failure and causes all stakeholders in the learning process such as teachers, administrators, and families to experience significant difficulties.

According to Joannis and Johnson (1988), student resistance is a reluctance to learn. It includes the reluctance to actively understand, discuss, or question ideas presented by classmates or teachers. Student resistance is sometimes characterized by passivity and sometimes hostility, and such a path is preferred by the student as a means of continuing to look at the world critically. Tolman and Kremling (2017) define resistance as a state of motivation in which students deny learning opportunities due to systemic factors. This motivation shapes and directs behaviors as a result of multiple interaction factors. According to Tolman and Kremling (2017), autonomy and self-protection are the two basic motivations that constitute resistance. The student, who has the motivation for autonomy, wants to establish his own autonomy in the classroom, sees learning opportunities as part of a repressive system that forces him to think in a way he would not accept, believes that he does not need education and teachers. In this case, the student resists learning opportunities. A student with the motivation to protect himself may believe that he should make any authority happy, or that he is responsible for his family's economic progress prospects. He may be insecure about his abilities or just focused on getting good grades.

Student resistance can occur in different ways in a learning environment. There are different classifications regarding student resistance in the literature. Burroughs, Kearney and Plax (1989), classified student resistance as passive and active resistance. According to the researchers, active resistance is the obvious and observable actions the student actually takes to counter the teacher's adaptation attempts, whereas passive resistance remains basically

an avoidance response and includes messages referring to the student's hidden or unobservable behaviors such as avoidance, non-participation, unwillingness (Kearney & Plax, 1992).

According to Richmond and McCroskey (1992), student resistance in a classroom can be defined as either constructive or destructive. Constructive student resistance is defined as student behaviors such as asking challenging questions, making suggestions, helping other students, and giving feedback on the teacher's professional development. Destructive resistance, on the other hand, is behaviors that negatively affect educational activities, such as engaging in other things in the lesson, talking with others or making fun of the teacher (Richmond & McCroskey; 1992, p.103).

In the literature, there are quite a few studies on understanding the structure of student resistance, defining and classifying resistance behaviors. In the study conducted by Burroughs et al. (1989), scenarios prepared in accordance with different teacher approaches were used and students' responses to these scenarios were examined. The messages containing the student's possible reactions were analyzed and classified. As a result of the analysis, 19 different resistance categories such as "advising the teacher", "blaming the teacher" and "avoiding" etc. were created. By examining the messages representing each category, it was concluded that the generated resistance strategies represented both active and passive types of resistance (Burroughs et al., 1989).

Another important study on student resistance includes observations, interviews and case studies that lasted for four months in two different suburban high schools with similar structures in the study of Alpert (1984, 1987). Alpert (1991) expresses the forms of resistance that emerge in classrooms as "reluctant participation", "discussion" and "compliance" in which the requirements of the process are fulfilled by the students but not active participation. Russell (2006) conducted a comparative study on student resistance in some high schools in Birmingham, England and Sydney, Australia. The schools in the related research are with a multicultural structure with relatively low levels of attendance and academic success of students. In the research, young people between the ages of 14-16 were observed in the classroom or in the playgrounds within the scope of field studies. In addition, semi-structured interviews were conducted with students, teachers and the school administration. Russell (2006) demonstrated in his research how student resistance plays a determining role on the tensions between various cultures and identities in different spheres of life. He listed the factors that shape student resistance and interact with each other as "national policies, local environment, characteristics of the school and the characteristics of teachers and students" from macro to micro level.

In another study conducted by Siedel and Tanner (2013) based on observation, hypotheses were tried to be produced about the origins of possible student resistance in classrooms in order to support the use of innovative approaches (collaborative learning, projects, etc.) in undergraduate biology teaching. In the study, "interaction with peers, teacher behaviors and student's previous experiences" were identified as three possible origins of student resistance.

The number of studies conducted in Turkey are quite insufficient for the student resistance. Studies conducted by Yüksel (2004) and Yüksel and Şahin (2005) include scale development studies to determine students' resistance behaviors. Yüksel (2004) worked with the last year students of the Faculty of Education in order to determine the student resistance behaviors towards the teaching-learning processes. Faculty of Education Students Resistance Scale was applied in this study. The scale consists of 5 factors. The first factor is resistance behaviors in the classroom; the second, third and fifth factors are thoughts and beliefs, and the fourth factor is friendship relations. Yüksel and Şahin (2005) developed the High School Students Resistance Scale in order to determine the resistance behaviors of students at lower socio-economic level. In the factor analysis, it was determined that the scale has a structure consisting of a total of 6 factors: active resistance behaviors, thoughts about teachers, thoughts about lessons, thoughts about homework, verbal resistance behaviors, and friendship relations.

Sarı (2018) has developed a scale that determines the presence and frequency of resistance behaviors of primary and secondary school students according to the opinions of teachers of primary and secondary schools in central districts of Adana Province. The Student Resistance Behavior Scale for Teachers consists of 4 factors: "Resistance to Teacher Autonomy", "Hostile Attitudes", "Continuous Anger" and "Passive Resistance".

In this study; It is aimed to develop valid and reliable scale that can be used to determine the resistance of vocational high school students to two different course groups, vocational and common courses. Vocational Courses are the courses related with the selected vocational field. Common Courses are the non-vocational courses, like mathematics, physics, literature, foreign language...etc. The scales are named as Vocational High School Students' Resistance Scale Towards Vocational Courses (VHSSRS-VC) and Vocational High School Students' Resistance Scale for Common Courses (VHSSRS-CC).

METHOD

This section provides information about the study groups, the process of developing the scale and the data analysis.

Sample

Within the scope of the research, two different scales have been developed for vocational high school students' field / vocational and common courses. A two-stage process was followed in the development of both scales. In the two-stage process, firstly, Exploratory Factor Analysis (EFA) was performed to determine the factor structure

of the scales, and in the second stage, Confirmatory Factor Analysis (CFA) was carried out to evaluate the factor structure of the scales in another sample.

During the scale development, two different working groups were formed for EFA and CFA. An appropriate sampling method, one of the non-random sampling methods, was used to determine the students to participate in the study.

Pilot scale forms were applied to 313 students who continue their education in Ankara Province, Çankaya District Türk Telekom Vocational and Technical Anatolian High School and Aliye Yahşi Vocational and Technical Anatolian High Schools. 144 (46.0%) of the students were female and 169 (54.0%) were male. According to the grade variable, 108 (34.5%) of the students are 10th grade, 127 (40.6%) 11th grade and 78 (24.9%) 12th grade.

The 2nd study group, where CFA was carried out, consists of a total of 694 students studying in 13 Vocational and Technical Anatolian High Schools affiliated to the Ministry of National Education located in 5 different central districts (Altındağ, Yenimahalle, Keçiören, Etimesgut, Sincan) of Ankara Province. Second study group consists of, 458 (66.0%) female and 236 (34.0%) male students. According to their grades, 176 (25.4%) of the students are 9th grade, 167 (24.1%) are 10th grade, 175 (25.2%) are 11th grade and 176 (25.4%) are 12th grade.

Development of the Scale

Creating Conceptual Framework and Item Pool

In the first stage of scale development, the relevant literature was examined and a conceptual framework about "student resistance" was created. In order to create the scale items, content scanning was made on student resistance indicators by using the literature. In addition, 23 students attending the, 11th and 12th grades of Türk Telekom Technical and Anatolian Vocational High School located in the Çankaya District of Ankara were tried to form an item through interview and essay writing methods. In these studies, "What are your feelings and thoughts about the learning process, the teacher or the lesson in your vocational and common courses? How do you express these feelings and thoughts in the lessons?" "What are your attitudes and reactions towards the lessons or the teacher of the lesson when you have problems for any reason?" questions were posed. In addition, at this stage, interviews were made with 7 common course teachers and 9 vocational course teachers working in the same school. "What kind of opposing reactions do you observe students have towards your lessons and learning-teaching processes?" "What kind of situations do you encounter that make it difficult for you to conduct your lesson and motivate the student to learn?" questions were posed. Written or oral answers were used to create an item pool. Yüksel (2004) Faculty of Education Students Resistance Scale and Yüksel and Şahin (2005) High School Students Resistance Scale and Sarı (2018) Student Resistance Behaviors Scale According to Teachers were examined in terms of their contents and structural features. A total of 104 items were created for the pilot scale by making use of the items in the scales that were compatible with the data obtained from the study group.

Submission of the Pilot Scale to Expert Opinion

An expert's opinion was taken to ensure the content validity of the scale. First of all, the item pool which was created for the study was corrected in terms of compliance with the language and spelling rules in line with the opinions of two experts working in the field of Turkish education. Later, two assessment and evaluation experts related to the subject of the scale, four branch teachers who attended common / culture courses in vocational high schools, and four field / vocational course teachers were examined by 10 experts in terms of appropriateness and content validity of the items. At this stage, the scale item evaluation form was used. The item evaluation form was prepared as a triple rating scale as "Unnecessary (1)", "Should be Corrected (2)", "Necessary (3)" and was arranged in accordance with the scoring of each item. In addition, experts were asked to indicate their suggestions, if necessary, under each item in order to express additional opinions on the subject.

Expert opinions were evaluated by calculating the Content Validity Index (CVI). While evaluating the item evaluation forms from experts, Lawshe analysis results were examined to determine whether the items were suitable for the scale. The 6 items whose content validity ratio was below 0.94 were removed and it was decided that the pilot scale form would consist of 98 items.

In order to determine the intelligibility level of the items in the pilot scale, 10 students studying at a vocational high school were asked to read the scale items and explain what they understood from each item. Within the framework of the answers given by the students, 3 items were corrected in terms of expression and made more understandable. The scale is a five-point Likert-type scale and consists of the following options: "always" (5), "often" (4), "sometimes" (3), "rarely" (2) and never (1).

Data Collection

Pilot scale forms were applied to Study Group 1 face to face. In Study Group 2, due to COVID-19 pandemic conditions, the scale implementation process was carried out via Google Forms.

Data Analysis

SPSS 21.0 and LISREL 8.8 package programs were used in the analysis of the data obtained within the scope of the research. The data obtained from both study groups were first processed into the SPSS 21.0 program. Exploratory Factor Analysis (EFA) was performed by using SPSS 21.0 program to determine the factor structure of the scale and examine the construct validity after deleting the missing data on the study group 1 data. In addition to EFA in Study Group 1 data, item scale correlations and item analysis based on upper group-subgroup method were carried out in order to provide evidence for validity.

In order to provide evidence for the reliability of the scale, Cronbach Alpha coefficients were calculated separately for the whole scale and the factors forming the scale on the Study Group 1 data. In addition, the composite reliability coefficient was calculated for the factor and the whole scale, based on the Study Group 2 data.

The factor structure of the scale obtained with EFA was tested with CFA, providing additional evidence for the construct validity. For this, CFA was carried out on the data of 2nd study group. LISREL 8.8 package program was used for CFA. A convergent validity study was also conducted to provide evidence for construct validity. Convergent validity was obtained through the CFA results made through Study Group 2 data.

FINDINGS

In this section, findings about Vocational High School Students Resistance Scale for Vocational Courses (VHSSRS-VC) and Vocational High School Students Resistance Scale for Common Courses (VHSSRS-CC) are presented.

Findings Regarding the Content Validity of the Students Resistance Scale for Vocational Courses (VHSSRS-VC)

In this section, findings about content validity of Vocational High School Students Resistance Scale for Vocational Courses (VHSSRS-VC) are presented.

Findings Gathered from Exploratory Factor Analysis of Students Resistance Scale for Vocational Courses (VHSSRS-VC)

To test the suitability of the data for factor extraction, Kaiser-Meyer Olkin (KMO) and Bartlett Test of Sphericity values were applied. As a result of the analysis, it was seen that the KMO value was at an excellent level (KMO = 0.956) and the Bartlett Test was also significant ($\chi^2 = 11510.497$; $p < 0.01$). According to these results, we can say that the sample that constitutes Study Group 1 is suitable for factor analysis.

After determining the suitability of the data for factor analysis, factor analysis was performed on 98 items in the first stage using the non-rotated principal axis factoring to reveal the factor structure of the scale. In the first factor analysis, there was no limit to the number of factors and 11 factors with an eigenvalue greater than 1.00 were determined. The total variance of these 11 factors is 51.484%.

In the analysis, factor load value was taken as 0.32. In addition, attention has been paid to "the difference between two high factor load values is at least 0.10" (Büyüköztürk, 2012, p.125). In the continuation of the analysis, in order to ensure the independence between the factors and the conceptual significance of the factors (Büyüköztürk, 2002, p.476), the factors were rotated by using the Promax method which is an oblique factor rotation type. When looking at the distribution of the items by using the Promax rotation method, it was seen that the scale was collected in 3 factors with an eigenvalue greater than 1. Depending on the factor load values of the items, 42 items were excluded, since the load value is lower than 0.32; six items were excluded because they were overlapping items. Accordingly, factor analysis was repeated with the remaining 50 items after the extracted 48 items. As a result of the re-analysis, it was seen that the KMO value was at an excellent level (KMO = 0.96) and the Bartlett Test was also significant ($\chi^2 = 10898.103$; $p < 0.01$). The scree-plot used to decide the number of factors in factor analysis is shown in Figure 1.

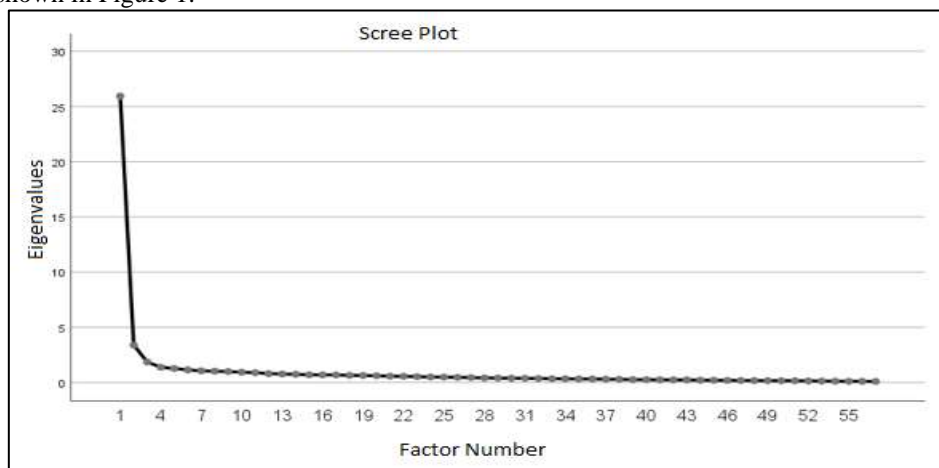


Fig.1: Scree-Plot for the Factors of VHSSRS-VC

As can be seen from the scree plot, as a result of the repeated factor analysis where the eigenvalue is taken as 1, the items can be grouped under 3 factors. The eigenvalues of the three factors and the variance rates are shown in Table 1.

Table 1: Eigenvalues of the Factors and the Variances of VHSSRS-VC

Factors	Rotation Sums of Squared Loadings		
	Eigenvalues	Variance %	Total %
1	23.010	46.020	55.417
2	3.071	6.142	
3	1.628	3.255	

The total variance amount of the three factors is 55.417%. The first factor shows 46.020% of the total variance and the eigenvalue appears to be 23.010. The second factor shows 6.142% of the total variance and the eigenvalue appears to be 3.071. The third factor shows 3.255% of the total variance and the eigenvalue is 1.628. In this context, it can be said that the total variance of the factors of the scale is sufficient. The factor load values of the items under each factor are shown in Table 2.

Table 2: Factor Load Values of Each Items of VHSSRS-VC

Items	Factors		
	Factor #1	Factor #2	Factor #3
M1	.881		
M2	.778		
M3	.908		
M4	.771		
M5	.756		
M7	.724		
M8	.884		
M9	.683		
M13	.704		
M14	.425		
M17	.806		
M19	.568		
M20	.484		
M21	.675		
M23	.613		
M24	.555		
M28	.541		
M29	.724		
M30	.785		
M77	.459		
M63		.559	
M71		.628	
M72		.661	
M76		.822	
M78		.533	
M79		.415	
M80		.559	
M81		.540	
M82		.587	
M84		.744	
M85		.704	
M87		.780	
M88		.732	
M89		.837	
M94		.755	
M97		.575	

M41		.573
M42		.624
M47		.672
M48		.621
M49		.677
M52		.876
M53		.580
M54		.669
M55		.610
M57		.470
M58		.692
M59		.764
M60		.771
M61		.768

When the factor load values are examined, it is seen that the load values of the first factor consisting of 20 items vary between 0.425 and 0.908, the load values of the second factor consisting of 16 items vary between 0.415 and 0.837, and the load values of the third factor consisting of 14 items vary between 0.470 and 0.876. The first factor obtained was named as "Claim for Autonomy", the second factor, "Finding Excuses", and the third factor, "Avoidance". Factors and items under the factors are shown in ANNEX 1.

Validity Results of Students Resistance Scale for Vocational Courses (VHSSRS-VC)

In order to examine the validity of the developed scale at item level, correlation values between the scores obtained from each item and the total score obtained from scale factors were calculated. In addition to the total correlations of the items, according to the scores, a group with the highest 27% (upper group) and a group with the lowest 27% (subgroup) were formed in order to determine the distinctiveness of each item. Then, the mean scores for each item were compared using the independent samples t-test. The correlation values calculated for the items and the results of the upper-lower group t-tests are shown in Table 3.

Table 3: Item Correlations and T-tests Results of VHSSRS-VC

Factor #1 Claim for Autonomy			Factor #2 Finding Excuses		
Items	r	T-tests	Items	r	T-tests
M1	0.79**	13.53**	M63	0.76**	17.17**
M2	0.74**	17.19**	M71	0.77**	17.05**
M3	0.80**	14.63**	M72	0.49**	7.23**
M4	0.73**	15.85**	M76	0.79**	20.65**
M5	0.70**	13.56**	M78	0.77**	16.96**
M7	0.65**	13.67**	M79	0.71**	14.64**
M8	0.79**	11.74**	M80	0.66**	14.38**
M9	0.76**	14.95**	M81	0.73**	16.60**
M13	0.68**	12.75**	M82	0.75**	17.25**
M14	0.64**	12.53**	M84	0.79**	18.73**
M17	0.76**	12.66**	M85	0.74**	17.41**
M19	0.74**	20.13**	M87	0.76**	17.17**
M20	0.70**	16.13**	M88	0.76**	18.71**
M21	0.76**	16.54**	M89	0.75**	18.25**
M23	0.71**	14.03**	M94	0.76**	17.19**
M24	0.65**	13.04**	M97	0.67**	14.63**
M28	0.69**	16.22**	Factor #3 Avoidance		
M29	0.77**	17.00**	M41	0.64**	12.00**
M30	0.77**	14.94**	M42	0.68**	16.29**
M77	0.67**	13.46**	M47	0.79**	19.58**
			M48	0.77**	18.06**
			M49	0.74**	16.69**
			M52	0.79**	20.00**
			M53	0.75**	17.06**
			M54	0.79**	20.55**
			M55	0.74**	17.67**

			M57	0.72**	15.00**
			M58	0.79**	21.27**
			M59	0.76**	18.87**
			M60	0.61**	10.58**
			M61	0.81**	18.37**

** p≤0.01

When Table 3 is examined, it is seen that the item-scale total correlation values of the items under the first factor, "Claim for Autonomy", vary between 0.65 and 0.80. It is observed that the item-scale total correlation values of the items under the "Finding Excuses" factor vary between 0.49 and 0.79. It is observed that the item-scale total correlation values of the items under the "Avoidance" factor vary between 0.64 and 0.81. According to Büyüköztürk (2012, p.171), the fact that the item total correlation coefficients are higher than 0.20 is an evidence for the validity of the scale items. These results indicate that the items are suitable to the purpose of scale. In addition, it can be said that each item has a moderate relationship with the points to be obtained from the factors. According to Table 4, the results of upper-subgroup independent samples t-test which is performed to determine the distinctiveness of the items under each factor were found to be significant for all items (p≤0.01). The positive and significant t values obtained for these items indicate that the means are in favor of the upper group. In this case, it can be said that items can distinguish individuals based on their characteristics.

Reliability Results of Students Resistance Scale for Vocational Courses (VHSSRS-VC)

Cronbach Alpha reliability coefficients were calculated on the scale items for the whole scale and its factors in order to provide evidence for the reliability of the VHSSRS-VC developed within the scope of the research. The reliability coefficients obtained for each factor in the scale and for the whole scale are shown in Table 4.

Table 4: Cronbach Alfa and Composite Reliability Coefficients for Eah Factor and the Total Scale of VHSSRS-VC

Factors	Number of Items	Cronbach Alfa Coefficients (α)	Composite Reliability
1. Claim for Autonomy	20	0.95	0.95
2. Finding Excuses	16	0.93	0.94
3. Avoidance	14	0.93	0.93
Total	50	0.97	0.98

When Table 4 is examined, it is seen that the cronbach alfa coefficient of the "Claim for Autonomy" factor is 0.95, the cronbach alfa coefficient of the "Finding Excuses" factor is 0.93, the cronbach alfa coefficient of the "Avoidance" factor is 0.93, and the cronbach alfa coefficient obtained for the whole scale is 0.97. According to Table 4, the composite reliability coefficient for the "Claim for Autonomy" factor is 0.95, the composite reliability coefficient for the "Finding Excuses" factor is 0.94, and the composite reliability coefficient for the "Avoidance" factor is 0.93 and the composite reliability coefficient obtained for the whole scale is 0.98. A reliability coefficient of 0.70 and above indicates that the scales are reliable (Büyüköztürk, 2010; Urbina, 2004). Accordingly, both the VHSSRS-VC scale factors and the Cronbach's alpha and composite reliability coefficients of the entire scale met this criterion. Thus, it can be said that the reliability coefficients of both the whole VHSSRS-VC and its factors are high. Büyüköztürk (2012) stated that it would be sufficient to have the Cronbach Alpha coefficient above 0.70. According to these results, it can be said that the reliability obtained for the scale factors and the whole scale is quite high.

Findings Gathered from Confirmatory Factor Analysis of Students Resistance Scale for Vocational Courses (VHSSRS-VC)

In order to provide evidence for the construct validity of the three-factor model obtained as a result of EFA for VHSSRS-VC, Confirmatory Factor Analysis (CFA) was carried out on the data of Study Group 2. Some assumptions need to be tested before moving to DFA. Firstly, Kaiser-Meyer-Olkin (KMO) and Bartlett tests were conducted for the suitability of the sample for factor analysis (Leech, Barrett, & Morgan, 2005). As a result of the analysis, KMO value was high and Bartlett test was significant [KMO = 0.973; $\chi^2 = 21569.440$; p = 0.00 < 0.05]. Finding the KMO value as 0.973 shows that the variables have an excellent sample size to apply factor analysis (Leech et al., 2005). The significant chi-square (χ^2) value obtained from the Bartlett test result indicates that multivariate normality is achieved. Then, in order to test whether the items are multivariate extreme values, Mahalonobis distances were examined and it was seen that there were no extreme values. Finally, in order to test whether there was a multicollinearity between items, the correlations between items were calculated. The multicollinearity is a problem based on the linear relationship between variables. If the correlation between the items is between 0.70 and 1.00, it means there is a multicollinearity. Correlation between the items was calculated

and it was seen that there was no correlation value over 0.70. According to this result, it can be said that there is no multicollinearity between the items of VHSSRS-VC.

After ensuring the assumptions, CFA was carried out. The maximum likelihood method was used in order to estimate the model parameters in CFA. As a result of CFA, model data fit was checked. The fit index values obtained from the confirmatory factor analysis which was performed regarding the suitability of the model established for VHSSRS-VC are shown in Table 5.

Table 5: The Fit Index Values Obtained From CFA of VHSSRS-VC

Model	χ^2/sd	RMSEA	NFI	NNFI	CFI	GFI	AGFI
Three Factor Model	2.55	0.047	0.99	0.99	0.99	0.99	0.99

When Table 7 is examined, it is seen that each fit index value meets the criterion values. First of all, the fact that χ^2/sd value is less than 3 indicates that the model fits the data quite well. In addition, the fact that NFI, NNFI, CFI, GFI and AGFI values are very close to 1 indicates that the model fits the data very well. The formal representation of the three-factor structure regarding the measurement model is presented in Figure 2.

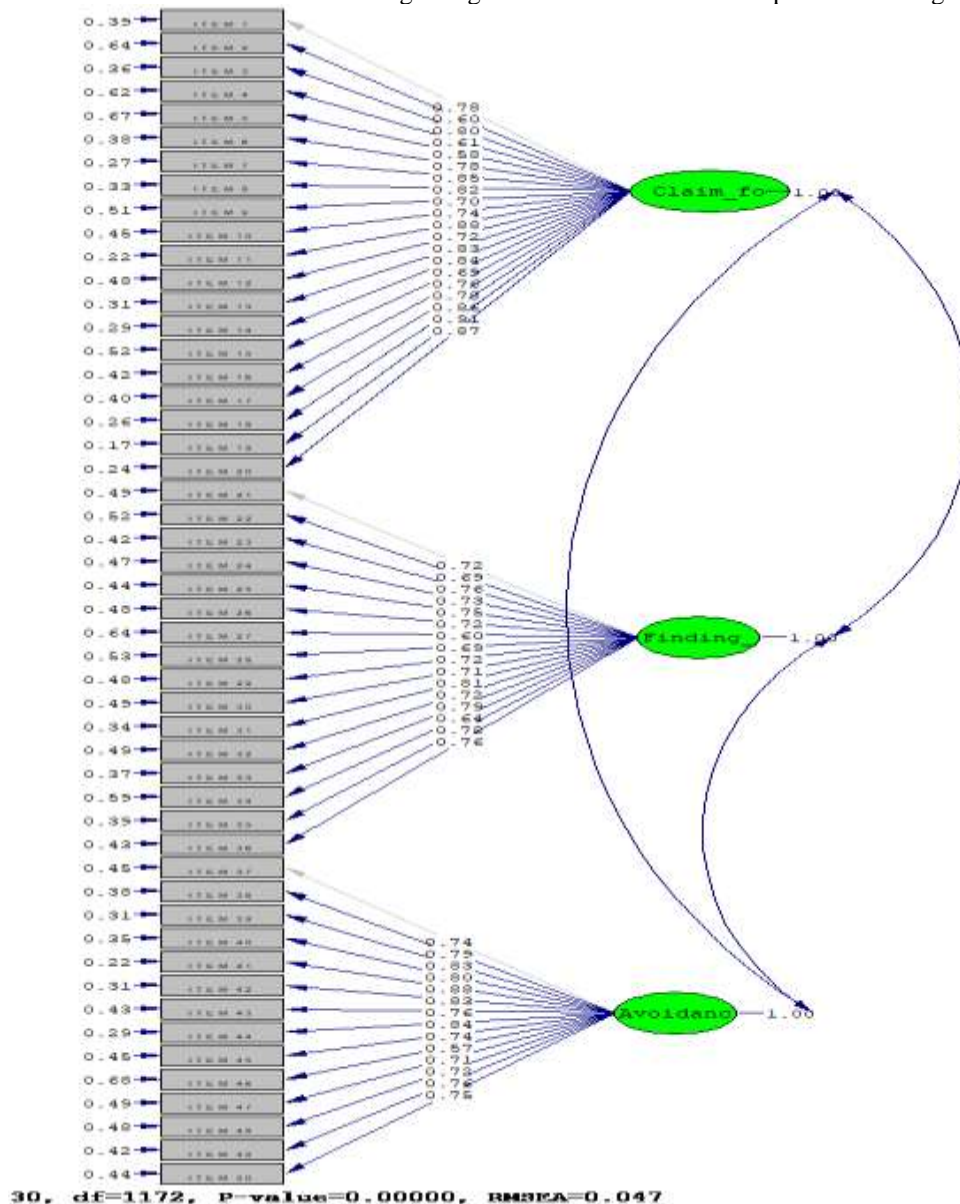


Fig.2: Confirmatory Factor Analysis Measurement Model for the VHSSRS-VC

Figure 2 shows the standard factor load values and error variances for the items. Accordingly, it is found that the load values of the items in the "Claim for Autonomy" factor are between $\lambda = 0.58-0.91$ and the error values are between $\epsilon = 0.17-0.67$; The load values of the items in the "Finding Excuses" factor are between $\lambda = 0.60-0.81$ and the error values are between $\epsilon = 0.34-0.64$; It is seen that the load values of the items in the "Avoidance"

factor are between $\lambda = 0.57-0.88$ and the error values are between $\varepsilon = 0.34-0.64$. In addition, according to Figure 2, the item factor load value obtained for each factor is above 0.32 and the error values of the items are below 0.90. Based on these results, it can be said that the measurement model has a good level of adaptation to the relevant data, the items in the model represent the relevant structures well, and the measurement model is a valid model for the three-factor structure of the scale.

In addition to CFA (Confirmatory Factor Analysis) for the construct validity of the VHSSRS-VC scale, convergent validity was also calculated. The fact that the factor loads obtained from the CFA are high enough indicates that the convergent validity of the scale is provided. In addition to factor loads, it can be determined whether convergent validity is achieved by examining the AVE (Average Variance Extracted) values. An AVE value above 0.50 indicates convergent validity (Fornell & Larcker, 1981). The AVE formula was developed by Fornell and Larckers (1981). The AVE value is found by dividing the sum of the squares of the standardized factor loads of the items under a factor by the number of items. AVE values for factor loadings obtained from CFA are shown in Table 6.

Table 6: AVE Values for Factor Loads Obtained from CFA

Factors	AVE Values
Claim for Autonomy	0.60
Finding Excuses	0.53
Avoidance	0.59

When Table 6 is examined, it is seen that the AVE values calculated for the factor loads obtained from CFA are above the 0.50 criterion value. Accordingly, it can be said that the convergent validity of the VHSSRS-VC was achieved.

Findings Regarding the Content Validity of the Students Resistance Scale for Common Courses (VHSSRS-CC)

In this section, findings about content validity of Vocational High School Students Resistance Scale for Common Courses (VHSSRS-CC) are presented.

Findings Gathered from Exploratory Factor Analysis of Students Resistance Scale for Common Courses (VHSSRS-CC)

To test the suitability of the data for factor extraction, Kaiser-Meyer Olkin (KMO) and Bartlett Sphericity test values were applied. As a result of the analysis, it was seen that the KMO value was at an excellent level (KMO = 0.951) and the Barlett Test was also significant ($\chi^2 = 11234.497$; $p < 0.01$). According to these results, it can be said that the suitability of the data constituting Study Group 1 to factor analysis is at an excellent level (Field, 2009, p. 659).

After determining the suitability of the data for factor analysis, factor analysis was performed on 98 items in the first stage using the non-rotated principal axis factoring to reveal the factor structure of the scale. In the first factor analysis, no limit was imposed on the number of factors and 10 factors with an eigenvalue greater than 1.00 were determined. The total variance of these 10 factors is 58.422%.

In the continuation of the analysis, in order to ensure the independence between the factors and the conceptual significance of the factors (Büyüköztürk, 2002, p.476), the factors were converted by using the Promax method which is a type of oblique factor rotation. When looking at the distribution of the items by using the Promax rotation method, it was seen that the scale was collected in 3 factors with an eigenvalue greater than 1. Depending on the items' factor load values, 48 items were excluded since the load value is lower than 0.32 and 7 items were excluded from the analysis since they were overlapping items. Accordingly, factor analysis was repeated with the remaining 42 items after 55 items removed. As a result of the re-analysis, it was seen that the KMO value was at an excellent level (KMO = 0.97) and the Bartlett Test was also significant ($\chi^2 = 11518.193$; $p < 0.01$). The scree-plot used to decide the number of factors in factor analysis is shown in Figure 3.

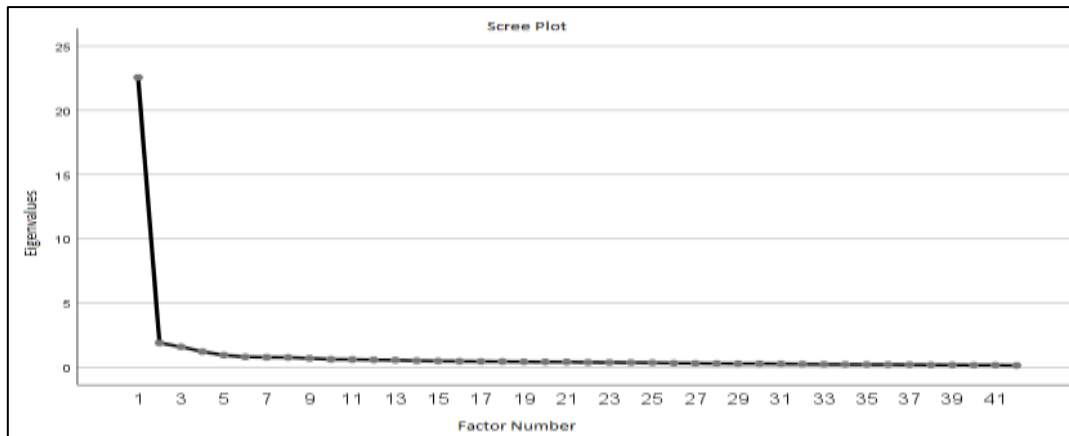


Fig.3: Scree-Plot for the Factors of VHSSRS-CC

As can be seen from the scree plot, as a result of the repeated factor analysis where the eigenvalue is taken as 1, the items can be grouped under 3 factors.

The eigenvalues of the three factors and the variance rates are shown in Table 7.

Table 7. Eigenvalues of the Factors and the Variances of VHSSRS-CC

Factors	Rotation Sums of Squared Loadings		
	Eigenvalues	Variance %	Total %
1	24.695	53.685	61.383
2	1.879	4.084	
3	1.663	3.615	

The total variance for the three factors is 61.383%. The first factor shows 53.685% of the total variance and the eigenvalue appears to be 24.695. The second factor shows 4.084% of the total variance and appears to have an eigenvalue of 1.879. The third factor shows 3.165% of the total variance and appears to have an eigenvalue of 1.663. In this context, it can be said that the total variation ratio explained by the factors of the scale is sufficient. The factor load values of the items collected under each factor are shown in Table 8.

Table 8: Factor Load Values of Each Items of VHSSRS-CC

Items	Factors		
	Factor #1	Factor #2	Factor #3
M1	.897		
M2	.930		
M4	.693		
M6	.720		
M7	.561		
M8	.787		
M9	.712		
M13	.631		
M18	.526		
M21	.632		
M73	.321		
M77	.361		
M63		.692	
M71		.613	
M72		.825	
M76		.686	
M78		.495	
M81		.751	
M82		.760	
M84		.743	
M85		.799	
M87		.607	

M88		.653	
M89		.796	
M94		.761	
M95		.662	
M97		.835	
M26			.520
M27			.685
M31			.576
M35			.642
M39			.623
M41			.990
M42			.826
M47			.620
M48			.677
M49			.676
M53			.620
M55			.599
M57			.605
M59			.628
M60			.663

When the factor load values are examined, it is seen that the load values of the first factor consisting of 12 items vary between 0.321 and 0.930, the load values of the second factor consisting of 15 items are between 0.495 and 0.835, and the load values of the third factor consisting of 15 items vary between 0.520 and 0.990. Among the factors obtained, the first factor was named as "Claim for Autonomy", the second factor, "Finding Excuses", and the third factor, "Avoidance". Factors and items under the factors are shown in ANNEX 2.

Validity Results of Students Resistance Scale for Common Courses (VHSSRS-CC)

In order to examine the validity of the developed scale at item level, correlation values between the scores obtained from each item and the total score obtained from scale factors were calculated. In addition to item total correlations, a 27% group (upper group) with the highest score and a 27% group (subgroup) with the lowest score were formed in order to determine the distinctiveness of each item. Then, the mean scores for each item were compared using the independent samples t-test. The correlation values calculated for the items and the results of the upper-lower group t-tests are shown in Table 9.

Table 9: Item Correlations and T-tests Results of VHSSRS-CC

Factor #1 Claim for Autonomy			Factor #3 Avoidance		
Items	r	T-Tests	Items	r	T-Tests
M1	0.81**	17.78**	M26	0.74**	19.11**
M2	0.79**	19.88**	M27	0.72**	15.75**
M4	0.79**	19.44**	M31	0.76**	18.92**
M6	0.77**	18.38**	M35	0.76**	17.16**
M7	0.74**	18.19**	M39	0.72**	16.17**
M8	0.76**	13.21**	M41	0.78**	20.31**
M9	0.81**	19.09**	M42	0.74**	18.57**
M13	0.73**	15.46**	M47	0.81**	24.09**
M18	0.77**	18.10**	M48	0.79**	19.51**
M21	0.82**	21.83**	M49	0.81**	22.25**
M73	0.72**	15.83**	M53	0.78**	21.08**
M77	0.74**	16.75**	M55	0.79**	21.57**
Factor #2 Finding Excuses			M57	0.77**	16.96**
M63	0.78**	18.16**	M59	0.79**	21.42**
M71	0.77**	19.46**	M60	0.83**	22.80**
M72	0.79**	19.86**			
M76	0.79**	20.62**			
M78	0.79**	20.27**			
M81	0.77**	17.56**			
M82	0.76**	17.17**			

M84	0.82**	21.22**			
M85	0.82**	22.33**			
M87	0.80**	21.50**			
M88	0.80**	20.39**			
M89	0.84**	24.28**			
M94	0.82**	22.14**			
M95	0.77**	18.33**			
M97	0.81**	20.57**			

** p≤0.01

When Table 8 is examined, the item-scale total correlation values of the items under the first factor, the "Claim for Autonomy", vary between 0.72 to 0.82, the item-scale total correlation values of the items under "Finding Excuses" factor vary between 0.76 to 0.84, and the item-scale total correlation values of the items under "Avoidance" factor are vary between 0.72 to 0.83. These results indicate that the items are suitable to the purpose of scale. According to Table 10, the results of the upper-lower group independent samples t-test which is performed to determine the distinctiveness of the items under each factor were found to be significant for all items (p≤0.01). The positive and significant t values obtained for these items indicate that the means are in favor of the upper group. In this case, it can be said that items can distinguish individuals based on their characteristics.

Reliability Results of Students Resistance Scale for Common Courses (VHSSRS-CC)

Cronbach Alpha reliability coefficients were calculated on the scale items for the whole scale and its factors in order to provide evidence for the reliability of the VHSSRS-CC developed within the scope of the research. The reliability coefficients obtained for each factor in the scale and for the whole scale are shown in Table 10.

Table 10: Cronbach Alfa Coefficients and Composite Reliability Coefficients for Each Factor and the Total Scale of VHSSRS-CC

Factors	Number of Items	Cronbach Alfa Coefficients (α)	Composite Reliability
1. Claim for Autonomy	12	0.94	0.92
2. Finding Excuses	15	0.96	0.94
3. Avoidance	15	0.95	0.94
Total	42	0.98	0.98

When Table 10 is examined, it can be seen that the cronbach alfa coefficient of the "Claim for Autonomy" factor is 0.94, the cronbach alfa coefficient of the "Finding Excuses" factor is 0.96, the cronbach alfa coefficient of the "Avoidance" factor is 0.95, and the cronbach alfa coefficient obtained for the whole scale is 0.98. According to Table 10, the composite reliability coefficient for the "Claim for Autonomy" factor is 0.92, the composite reliability coefficient for the "Finding Excuses" factor is 0.94, the composite reliability coefficient for the "Avoidance" factor is 0.94 and the composite reliability coefficient obtained for the whole scale was 0.98. It is seen that both the Cronbach's alpha and composite reliability coefficients of the VHSSRS-CC scale factors and the whole scale are above 0.70. Thus, it can be said that the reliability coefficients of both VHSSRS-CC and its factors are high. Based on these results, it can be said that the reliability obtained for the scale factors and the whole scale is quite high.

Findings Gathered from Confirmatory Factor Analysis of Students Resistance Scale for Common Courses (VHSSRS-CC)

In order to provide evidence for the construct validity of the three-factor model obtained as a result of EFA for VHSSRS-CC, CFA was carried out on the data of Study Group 2. Some assumptions need to be tested before performing CFA. Firstly, Kaiser-Meyer-Olkin (KMO) and Bartlett tests were conducted for the suitability of the sample for factor analysis (Leech ve others, 2005). As a result of the analysis, KMO value was high and Barlett test was significant [KMO=0.977; $\chi^2= 21157.912$; p = 0.00<0.05]. The KMO value being 0.977 indicates that the variables have an excellent sample size to apply factor analysis (Leech, Barrett and Morgan 2005). The significant chi-square (χ^2) value obtained from the Barlett test result indicates that multivariate normality is achieved. Then, in order to test whether the items are multivariate extreme values, Mahalonobis distances were examined and it was seen that there were no extreme values. Finally, in order to test whether there is multicollinearity between the items, the correlation between the items was calculated and it was seen that there was no correlation value over 0.70. Based on these results, it can be said that there is no multicollinearity between the items of VHSSRS-CC. After ensuring the assumptions, CFA was carried out. The maximum likelihood method was used in order to estimate the model parameters in CFA. As a result of CFA, model data fit was checked. The fit index values

obtained from the confirmatory factor analysis which was performed regarding the suitability of the model established for VHSSRS-CC are shown in Table 11.

Table 11: The Fit Index Values Obtained from CFA of VHSSRS-CC

Model	χ^2/sd	RMSEA	NFI	NNFI	CFI	GFI	AGFI
Three-Factor Model	3.88	0.065	0.98	0.99	0.99	0.99	0.99

When Table 10 is examined, it is seen that each fit index value meets the criterion values. First of all, the fact that χ^2/sd value is less than 3 indicates that the model fits the data quite well. In addition, the fact that NFI, NNFI, CFI, GFI and AGFI values are very close to 1 indicates that the model fits the data very well. The formal representation of the three-factor structure regarding the measurement model is presented in Figure 4.

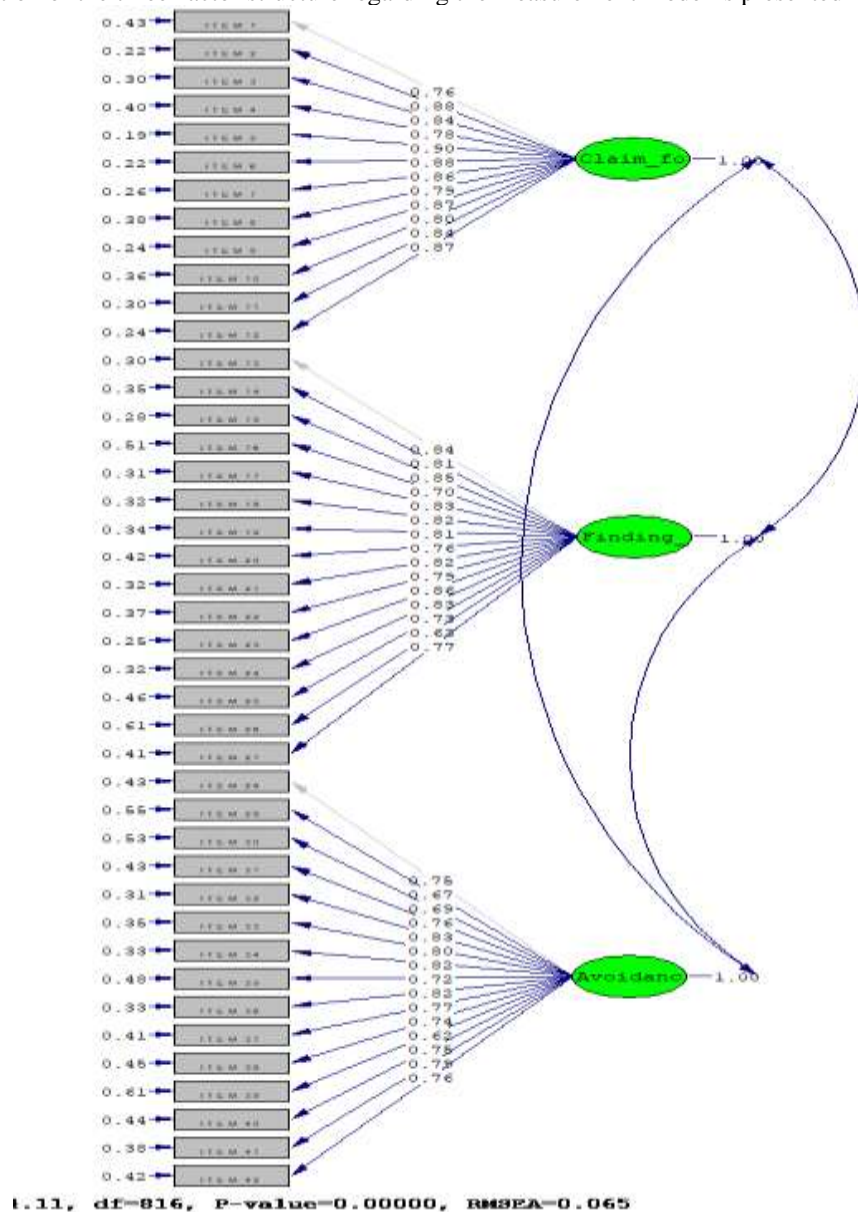


Fig.4: Confirmatory Factor Analysis Measurement Model for the VHSSRS-CC

Figure 4 shows the standard factor load values and error variances for the items. Accordingly, it is found that the load values of the items in the "Claim for Autonomy" factor are between $\lambda = 0.76 - 0.90$ and the error values are between $\varepsilon = 0.19 - 0.43$; The load values of the items in the "Finding Excuses" factor are between $\lambda = 0.63 - 0.86$ and the error values are between $\varepsilon = 0.25 - 0.61$; It is seen that the load values of the items in the "Avoidance" factor are between $\lambda = 0.62 - 0.83$ and the error values are between $\varepsilon = 0.31 - 0.61$. In addition, according to Figure 4, the item factor load value obtained for each factor is above 0.32 and the error values of the items are below 0.90. Based on these results, it can be said that the measurement model has a good level of adaptation to the

relevant data, the items in the model represent the relevant structures well, and the measurement model is a valid model for the three-factor structure of the scale.

In addition to CFA (Confirmatory Factor Analysis) for the construct validity of the VHSSRS-CC scale, convergent validity was also calculated. AVE values for factor loadings obtained from CFA are shown in Table 12.

Tablo 12: DFA' dan Elde Edilen Faktör Yükleri için AVE Değerleri

Factors	AVE Values
Claim for Autonomy	0.71
Finding Excuses	0.63
Avoidance	0.57

When Table 12 is examined, it can be seen that the AVE values calculated for the factor loads obtained from CFA are above the 0.50 criterion value. Accordingly, it can be said that the convergent validity of the VHSSRS-CC was achieved.

DISCUSSION AND CONCLUSION

In this study; it was aimed to develop valid and reliable measurement tools to measure the resistance of vocational high school students to the courses. Within the scope of the study, two separate scale studies were conducted for the two main course groups in vocational high schools, which are field / vocational and common courses. The scales are named as Vocational High School Students' Resistance Scale for Vocational Courses (VHSSRS-VC) and Vocational High School Students' Resistance Scale for Common Courses (VHSSRS-CC). During the scale development phase, two different working groups were worked on. EFA was performed for scale validity with the first study group, and CFA was carried out for the factor structure obtained from EFA with the second study group. Cronbach alpha coefficient was calculated for the reliability of both scales. The results obtained are reported separately for both scales.

For VHSSRS-VC, in the first study group, EFA was performed for validity, Cronbach Alpha Coefficient was calculated for validity analysis and reliability at item level were calculated. Three factors were obtained as a result of EFA. The variance rate of three factors was found to be 55.417%. The variance ratio between 40% and 60% indicates that the scale is suitable in terms of construct validity. In addition, item-total correlation and 27% lower-upper group comparisons were made among validity studies performed at item level. The item-total correlation and the results of 27% lower-upper group comparisons proved that the item discrimination power of the scale was sufficient. As a result of the analysis made for the reliability of the scale; The reliability of the Cronbach's Alpha Coefficient of the 20-item "Claim for Autonomy" factor was 0.95, the reliability of the Cronbach Alpha Coefficient of the 16-item "Finding Excuses" factor was 0.93, the reliability of the Cronbach Alpha Coefficient of the "Avoidance" factor was 0.93, and the reliability coefficient obtained for the whole scale was 0.97. . These results are proof that the reliability of the scale is high.

For VHSSRS-VC, CFA was performed on the data of the second study group and additional evidence of validity was provided. When the fit index values obtained from the performed CFA are examined; $\chi^2/sd = 2.55$, RMSEA = 0.047; NFI = 0.99; NNFI = 0.99; CFI = 0.99; GFI = 0.99 and AGFI = 0.99, and the values met the benchmark values. Thus, it was seen that the data were compatible with the model at an acceptable level. As a result, it was determined that the three-factor scale has a valid and reliable structure. CFA results also showed that the model is compatible.

For VHSSRS-CC, in the first study group, EFA was performed for validity, Cronbach Alpha Coefficient was calculated for validity analysis and reliability at item level were calculated. Three factors were obtained as a result of EFA. The variance rate of three factors was found to be 61.383%. The variance rate above 60% indicates that the scale is suitable for construct validity. In addition, item-total correlation and 27% lower-upper group comparisons were made among validity studies performed at item level. The item-total correlation and the results of 27% lower-upper group comparisons proved that the item discrimination power of the scale was sufficient. As a result of the analysis made for the reliability of the scale; The reliability of the Cronbach Alpha coefficient of the "Claim for Autonomy" factor, which consists of 12 items, is 0.94; The reliability of the Cronbach Alpha coefficient of the "Finding Excuses" factor, which consists of 15 items, is 0.96; The reliability of the Cronbach alpha coefficient of the "avoidance" factor was 0.95, and the reliability coefficient obtained for the whole scale was 0.98. These results are proof that the reliability of the scale is high.

For VHSSRS-CC, CFA was performed on the data of the second study group and additional evidence of validity was provided. When the fit index values obtained from the performed CFA are examined; $\chi^2/sd = 3.88$, RMSEA = 0.065; NFI = 0.98; NNFI = 0.98; CFI = 0.99; GFI = 0.99 and AGFI = 0.99, and the values met the benchmark values. Thus, it was seen that the data were compatible with the model at an acceptable level. As a result, it was determined that the three-factor scale has a valid and reliable structure. CFA results also showed that the model is compatible.

Both scales (VHSSRS-VC and VHSSRS-CC) have three-factor structures expressed as “Claim for Autonomy”, “Finding Excuses” and “Avoidance”. For VHSSRS-VC; the 1st factor “Claim for Autonomy” consists of 20 items, the second factor “Finding Excuses” 16 items, and the 3rd factor “Avoidance” consists of 14 items. For VHSSRS-CC, the first factor is "Claim for Autonomy" has 12 items, the second factor is "Finding Excuses" 15 items, and the third factor is "avoidance" 15 items.

Student resistance, which limits the effectiveness of educational activities and negatively affects the learning process, is an issue that should be focused and resolved by education researchers. Through the scales obtained through the research, the resistance of vocational high school students towards the courses can be realized and improvements can be made by focusing on the sources of resistance.

The quantitative data collection method was used in this study. Quantitative data collection methods provide generalizable data from large groups. However, the highly complex nature of the resistance creates the need to support future studies with qualitative data to be obtained from students and teachers.

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APPENDIX

Table A1: Turkish version of the Vocational High School Students' Resistance Scale – Vocational Courses (VHSSRS-VC).

Meslek Lisesi Öğrencileri Direnç Ölçeği – Alan Dersleri

Son Madde No	İlk Madde No	Maddeler	Hiçbir zaman	Nadiren	Bazen	Sık sık	Her zaman
			1	2	3	4	5
1	1	Öğretmenleri kızdırmaktan zevk alırım.	1	2	3	4	5
2	2	Öğretmenlere cevaplamakta zorlanacakları sorular sormak hoşuma gider.	1	2	3	4	5
3	3	Öğretmenlerin söylediklerinin tersini iddia ederek onlarla tartışmaya girerim.	1	2	3	4	5
4	4	Öğretmenlerle bana olan olumsuz tutumları konusunda tartışmaya girerim.	1	2	3	4	5
5	5	Öğretmenlere dersin işlenişi ya da mesleki yeterlikleri konusunda eleştirilerimi açıkça söylerim.	1	2	3	4	5
6	7	Öğretmenlerden hoşlanmazsam, bunu açıkça belli ederim.	1	2	3	4	5
7	8	Öğretmenleri gülünç duruma düştiklerini ya da hata yaptıklarını görmek hoşuma gider.	1	2	3	4	5
8	9	Ödevlerin ve bizden istenen diğer çalışmaların gerekli olup olmadığı konusunda öğretmenlerle tartışmaya girerim.	1	2	3	4	5
9	13	Gerektiğinde yaptıkları işi daha iyi yapmaları konusunda önerilerde bulunmaktan çekinmem.	1	2	3	4	5
10	14	Derslerde sorulara cevap vermeye çalışmak yerine “bilmiyorum” deyip geçmeyi tercih ederim.	1	2	3	4	5
11	17	Sorun yaşadığım öğretmenlere olumsuz tavır almak konusunda arkadaşlarımı da etkilemeye çalışırım.	1	2	3	4	5
12	19	Öğretmenlere bana haksızlık edemeyeceklerini en baştan göstermeye çalışırım.	1	2	3	4	5
13	20	Öğretmenlerin gerçekten bizim iyiliğimizi düşündüklerinden emin değilim.	1	2	3	4	5
14	21	Derslerde konuyla ilgisi olmayan sorular sorarak dersi kaynatmak hoşuma gider.	1	2	3	4	5
15	23	Sınav sonuçlarım hakkında öğretmenlerle tartışırım.	1	2	3	4	5
16	24	Derste sınıfın sessizliğinden rahatsız olurum.	1	2	3	4	5
17	28	Derslerle fazla ilgili görünen arkadaşlara sinirlenirim.	1	2	3	4	5
18	29	Derslerde öğrendiklerimin gereksizliği konusundaki görüşlerimi dile getiririm.	1	2	3	4	5
19	30	Derslerdeki kurallara itiraz ederim.	1	2	3	4	5
20	77	Dersi kaynatma konusunda arkadaşlarımı da cesaretlendiririm.	1	2	3	4	5
21	63	Bu derslerde başarının değerlendirilme yöntemini uygun bulmuyorum.	1	2	3	4	5
22	71	Konuların seviyemizin üstünde verildiğini düşünüyorum.	1	2	3	4	5
23	72	Derslerde gereğinden fazla kontrol altında tutulmak beni bunaltıyor.	1	2	3	4	5
24	76	Bu derslerde öğretmenlerin öğrencilere yeterince eşit ve adil davranmadığını düşünüyorum.	1	2	3	4	5

25	78	Tıraş, makyaj, takı, okul üniforması gibi kılık kıyafet kuralları nedeni ile fazlaca uyarıldığım için bu derslere girmek istemiyorum.	1	2	3	4	5
26	79	Konular ilgimi çekse bile derse katılım göstermemin arkadaşlarım tarafından sinir bozucu ya da komik bulunacağına inanıyorum.	1	2	3	4	5
27	80	Cinsiyetim (kız ya da erkek olmak) nedeniyle bu derslerde daha fazla ilgili ve başarılı olmamın beklenmemesi gerektiğini düşünüyorum.	1	2	3	4	5
28	81	Akademik başarım düşük olduğu için meslek lisesine yönlendirilmiş olmak derslere motivasyonumu azaltıyor.	1	2	3	4	5
29	82	İsteğim dışında meslek lisesinde bulunduğum için derslere gereken önemi vermiyorum.	1	2	3	4	5
30	84	Duygu ve ihtiyaçlarımıza duyarız öğretmenlerin derslerine girmek istemiyorum.	1	2	3	4	5
31	85	Bu derslerde çok fazla disiplin kurulmaya çalışılması beni derslerden soğutuyor.	1	2	3	4	5
32	87	Bu dersler için gerekli bilgi temelim olmadığından çalışsam da başarılı olabileceğimi düşünmüyorum.	1	2	3	4	5
33	88	Ders konularını hayatta işe yarar bulmuyorum.	1	2	3	4	5
34	89	Bu dersleri başarmamın üniversiteye devam edebilmem için faydası olacağına inanmıyorum.	1	2	3	4	5
35	94	Sınıfta bu derslere karşı olumsuz tutum geliştirilmiş olması benim de derslere yönelik düşüncelerimi olumsuz etkiliyor.	1	2	3	4	5
36	97	Derslerde yaptığım iyi şeylerin görülmediğini ve gereği kadar takdir edilmediğimi düşünüyorum.	1	2	3	4	5
37	41	Konuya ilişkin sorularım olduğunda öğretmenlere sormak yerine arkadaşlarıma sormayı tercih ederim.	1	2	3	4	5
38	42	Sınıfta arka sıralarda oturup öğretmenlerin dikkatini çekmemeye çalışırım.	1	2	3	4	5
39	47	Derslerde zamanın geçmesini beklerim.	1	2	3	4	5
40	48	Ödev yaparken kendimi çok mutsuz hissedirim.	1	2	3	4	5
41	49	Ödev yapmamak için türlü bahaneler üretirim.	1	2	3	4	5
42	52	Başka şeyler düşündüğüm halde dersi dinliyormuş gibi davranırım	1	2	3	4	5
43	53	Doğru cevapları bilsem bile derse katılım göstermem.	1	2	3	4	5
44	54	Daha iyisini yapabileceğimi bildiğim halde ödevlerime fazla özen göstermem.	1	2	3	4	5
45	55	Derslerdeki grup çalışmalarına katılmaya gönüllü olmam.	1	2	3	4	5
46	57	Nöbet gibi ders dışı aktivitelere katılmak için gönüllü olurum.	1	2	3	4	5
47	58	Sadece sınavda çıkabilecek konuları öğrenmeye çalışırım.	1	2	3	4	5
48	59	Sınavlarda geçer not almak benim için yeterlidir.	1	2	3	4	5
49	60	Derslerde zorlanacağım çalışmalarda bulunmak istemem.	1	2	3	4	5
50	61	Derslerde önemli bir sorumluluk almak istemem.	1	2	3	4	5

Table A2: Turkish version of the Vocational High School Students' Resistance Scale – Common Courses (VHSSRS-CC).

Meslek Lisesi Öğrencileri Direnç Ölçeği – Ortak Dersler							
Son Madde No	İlk Madde No	Maddeler	Hiçbir zaman	Nadiren	Bazen	Sık sık	Her zaman
			1	2	3	4	5
1	1	Öğretmenlere cevaplamakta zorlanacakları sorular sormak hoşuma gider.	1	2	3	4	5
2	2	Öğretmenleri kızdırmaktan zevk alırım.	1	2	3	4	5
3	4	Öğretmenlerin gülünç duruma düştüklerini ya da hata yaptıklarını görmek hoşuma gider.	1	2	3	4	5
4	6	Öğretmenlerin mesleği konusunda iyi olmadığını düşünürsem onu gerekli yerlere şikâyet ederim.	1	2	3	4	5
5	7	Ödevlerin ve bizden istenen diğer çalışmaların gerekli olup olmadığı konusunda öğretmenlerle tartışmaya girerim.	1	2	3	4	5
6	8	Öğretmenlerle bana olan olumsuz tutumları konusunda tartışmaya girerim.	1	2	3	4	5
7	9	Derslerde konuyla ilgisi olmayan sorular sorarak dersi kaynatmak hoşuma gider.	1	2	3	4	5
8	13	Gerektiğinde öğretmenlere yaptıkları işi daha iyi yapmaları konusunda önerilerde bulunmaktan çekinmem.	1	2	3	4	5
9	18	Öğretmenlerden hoşlanmazsam, bunu açıkça belli ederim.	1	2	3	4	5
10	21	Öğretmenlerin hakkımdaki olumlu ya da olumsuz kanaatlerini önemsemiyorum.	1	2	3	4	5
11	73	Derste sınıfın sessizliğinden rahatsız olurum.	1	2	3	4	5
12	77	Derslerde dersi engellemek için neler yapabileceğimi düşünüyorum.	1	2	3	4	5
13	63	Derslerde gereğinden fazla kontrol altında tutulmak beni bunaltıyor.	1	2	3	4	5
14	71	Derslerde yaptığım iyi şeylerin görülmediğini ve gereği kadar takdir edilmediğini düşünüyorum.	1	2	3	4	5
15	72	Bu derslerde çok fazla disiplin kurulmaya çalışılması beni derslerden soğutuyor.	1	2	3	4	5
16	76	Bu dersleri başarmamın üniversiteye devam edebilmem için faydası olacağına inanmıyorum.	1	2	3	4	5
17	78	İsteğim dışında meslek lisesinde bulunduğum için derslere gereken önemi vermiyorum.	1	2	3	4	5
18	81	Akademik başarımla düşük olduğum için meslek lisesine yönlendirilmiş olmak derslere motivasyonumu azaltıyor	1	2	3	4	5
19	82	Sınıfta bu derslere karşı olumsuz tutum geliştirilmiş olması benim de derslere yönelik düşüncelerimi olumsuz etkiliyor	1	2	3	4	5
20	84	Duygu ve ihtiyaçlarımıza duyarsız öğretmenlerin derslerine girmek istemiyorum.	1	2	3	4	5
21	85	Bu derslerde başarımın değerlendirilme yöntemini uygun bulmuyorum.	1	2	3	4	5

22	87	Bu derslerde öğretmenlerin öğrencilere yeterince eşit ve adil davranmadığını düşünüyorum.	1	2	3	4	5
23	88	Ders konularını hayatta işe yarar bulmuyorum.	1	2	3	4	5
24	89	Dersleri sabote etmeyi doğru bulmasam da bu konuda sınıf arkadaşlarımla birlikte hareket ederim.	1	2	3	4	5
25	94	Konuların seviyemizin üstünde verildiğini düşünüyorum.	1	2	3	4	5
26	95	Bu dersler için gerekli bilgi temelini olmadığından çalışsam da başarılı olabileceğimi düşünmüyorum.	1	2	3	4	5
27	97	Tıraş, makyaj, takı, okul üniforması, gibi kılık kıyafet kuralları nedeniyle fazlaca uyarıldığımı için bu derslere girmek istemiyorum.	1	2	3	4	5
28	26	Konuya ilişkin sorularım olduğunda öğretmenlere sormak yerine arkadaşlarıma sormayı tercih ederim.	1	2	3	4	5
29	27	Sınıfta arka sıralarda oturup öğretmenlerin dikkatini çekmemeye çalışırım.	1	2	3	4	5
30	31	Öğretmenlere ders saatinde ders işlemek yerine serbest bırakılmak konusunda ısrar ederim.	1	2	3	4	5
31	35	Ödev yaparken kendimi çok mutsuz hissederim.	1	2	3	4	5
32	39	Ödev yapmamak için türlü bahaneler üretirim.	1	2	3	4	5
33	41	Derslerde zorlanacağım çalışmalarda bulunmak istemem.	1	2	3	4	5
34	42	Öğretmenlerin derslerini gereğinden fazla ciddiye aldıklarını düşünüyorum.	1	2	3	4	5
35	47	Sınavlarda geçer not almak benim için yeterlidir.	1	2	3	4	5
36	48	Öğretmenlerin söylediklerine katılmasam da aynı fikirdeymiş gibi görünmeye çalışırım.	1	2	3	4	5
37	49	Doğru cevapları bilsem bile derse katılım göstermem.	1	2	3	4	5
38	53	Derslerde zamanın geçmesini beklerim.	1	2	3	4	5
39	55	Nöbet gibi ders dışı aktivitelere katılmak için gönüllü olurum.	1	2	3	4	5
40	57	Derslerdeki grup çalışmalarına katılmaya gönüllü olmam.	1	2	3	4	5
41	59	Öğretmenler hakkındaki olumsuz düşüncelerimi arkadaşlarımla paylaşıyorum.	1	2	3	4	5
42	60	Derslerde anlayamadığım konular olduğunda uyurum ya da müzik dinlemek, resim çizmek gibi başka şeylerle meşgul olurum.	1	2	3	4	5