

## EXPLORING DIMENSIONS OF SERVICE-LEARNING SCALE IN PAKISTANI CONTEXT

Iqbal Ahmad, Department of Education, University of Malakan, KP, Pakistan. Email: [shahnavi777@hotmail.com](mailto:shahnavi777@hotmail.com)

**Abstract.** *Service-learning is an emerging popular teaching and learning approach. It is considered to be associated with improved*

Received September 12, 2019  
Revised September 14, 2019  
Accepted December 14, 2019

*students' academic outcomes. Numerous scales are being used for assessing service-learning world-wide. Service-Learning Scale (SLS) is one such important scale which has also been used for measuring students' service related outcomes in different studies. This study is purposefully designed to examine the psychometric properties of SLS in Pakistani context. To collect data, 141 students were approached through a survey method who participated in service-learning projects vocational training institutes of Pakistan. These students were purposively selected from 15 vocational training institutes of where service-learning is implemented as a curriculum course. Data was analyzed using Exploratory Factor Analysis (EFA) in order to explore the hidden dimensions in the scale. A three factor structure model emerged based on Component Factor Analysis (PCA) method. These factors included content knowledge, interpersonal skills and volunteering attitude. The results of this study confirmed that service-learning is a three factor model and is a reliable and valid scale for assessing service-learning outcomes. For further validation it is suggested that this three factor model needs testing in other contexts for more extensive results and improvement of psychometrics of the scale. The newness of the study is psychometric validation (contextual) of SLA as there hardly exists any evidence of its validation in Pakistan. The study has theoretical as well as practical implications.*

**Keywords:** Service-learning, Service Learning Scale (SLS), service learning outcomes, vocational education, management perspectives

### Introduction

In recent years, the psychometric aspects of scales for assessment of service-learning outcomes are receiving greater attention (Bringle, Phillips, & Hudson, 2004; Gershenson-Gates, 2012; Moely, Mercer, Ilustre, Miron, & McFarland, 2002). Some measures of service-learning exist that assess the different aspects

of student development for example, moral, social, civic and so on. However, these scales lack clear evidence of validity in terms of definition and comprehensiveness to measure the different aspects of students' service-learning based development and for evaluating service-learning outcomes. An important question about a questionnaire is related to its validity and reliability. One of the major issues in service-learning research is the increasing number of studies conducted on measuring the students' outcomes. However, the existing studies are either atheoretical or lack the ability to clearly describe the basis of the assumptions about the outcomes of students' service-learning outcomes (Billig, 2002; Billig & Waterman, 2014; Phillips, 2011). Standardized scales are important measuring tools for obtaining necessary information about service-learning outcomes.

This paper will be looking to explore the psychometric features of service-learning scale in the context of Pakistan by using exploratory factor analysis. The study will also test the hypothetical model by using confirmatory factor analysis.

### **Literature Review**

Service-learning is an experiential teaching and learning approach. In the past three decades, the concept has tremendously grown into a popular pedagogy. It has been identified as one of the top high impact teaching and learning practice by the American Association of Colleges and Universities due its uniqueness for effectively connecting academic content with real life experiences (Brownell & Swaner, 2000; Jerome, 2012). Research has proved the academic position of service-learning as an effective tool to develop work related skills and civic responsibility in different fields including vocational and technical education (Daniel, 2013). In the present day, the importance of service-learning as an effective teaching method is widely accepted due to its capacity to enhance students' professional skills and technical abilities (Fisher, Bagiati, & Sarma, 2014; Kenworthy-U'Ren, 2008; Vandzinskaite, Mazeikiene, & Ruskus, 2010). Due to its fast growing popularity, it has been incorporated into many educational courses such as marketing, business and management courses around the world (Andrews, 2007). Today an increasing awareness is taking place among educators for engaging students in the learning process outside of the traditional classroom environment into the real world. The argument is that, such types of experiences provide a real world setting to the students to develop their professional skills and civic responsibility (Ash, Clayton, & Atkinson, 2005).

Service-learning encourages students' civic engagement through community service participation (O'Connor, 2006). Engagement in problem solving and working in teams during service-learning cooperatively builds their

skills needed by employers in today's work place. As an academic method it promotes their pre-employment skills and job readiness (Daniel, 2013). Service-learning enables students to participate in a community-based service activity and apply their newly learned knowledge skills in solving different problems and learn from this experience. This prepares them for future professional responsibilities in the work place (Sarkees-Wircenski & Scott, 2003). Just like the service-learning educators, vocational educators also make efforts for producing such citizens who are civically responsible. Kolb's experiential theory is the most used teaching theory that guides the process of conducting technical and career education. Using this theory, students who are enrolled in the different technical or vocational courses are guided by their instructors by designing hands on tasks that needs interaction with real world situations which all the steps in the experiential learning theory (Clark & White, 2010).

Service-learning equips technical education graduates with professional skills (Ansari & Wu, 2013; Dean, 2005; Hina, Ajmal, Rahman, & Jumani, 2011). It prepares them for the world of work which is really possible through other traditional methods of education (Burns & Stokamer, 2011; Calvert & Kurji, 2012; Ewelt, 2013; Greenman, 2014; Vandzinskaite, et al., 2010). There are numerous evidences that students who participate in service-learning find better chances of employability and future careers. During service-learning practice, they undergo training where their knowledge is refined. They also gain new skills when they work in the community along with others (Ngai, Cheung, Ngai, & Chan, 2010). Hence, researchers have also testified that skilled people can effectively address problems of the society and service-learning helps the education institutions to achieve this aim by developing service minded graduates (Billig & Waterman, 2014; Burns & Stokamer, 2011; Falk, 2012; Greenman, 2014; Jacoby, 2013).

In service-learning activity, students apply their classroom knowledge in practical setting that enhances not only their understanding of content materials. It also provides them with an opportunity to interact with people in the community in a real life context that develops their sense of civic responsibility (Levesque-Bristol, Knapp, & Fisher, 2011).

The above discussion shows service-learning is a popular academic approach. It has been implemented in the curriculum of many educational institutes around the world. Many instruments haven used for assessing service outcomes including service-learning sale (SLS) world-wide, however, there are no clear evidences of its psychometric testing and dimensional structural features. This study aimed to test the dimensional structure of SLS in the

context of Pakistan. On the other hand, service-learning researchers have already advocated for developing more comprehensive and authentic service-learning scales as the existing service-learning scales specifically did not clearly cover up the perspectives of administration and faculty members about all the aspects of service-learning implementation (Billig, 2002; Bringle, et al., 2004). The existing service-learning instruments mostly measured the perspectives of students and overlooked the perspectives of faculty members (Billig & Waterman, 2014; Phillips, 2011). For example, some measures of service-learning assessed the perspectives of students on their moral, social and civic development in general education field. Bringle, et al. (2004) stated that existing service-learning scales lacked clear evidence of validity in terms of definition and comprehensiveness to measure the different aspects of students' service-learning based development. Bringle, et al. (2004) and Gershenson-Gates (2012) have argued that the existing service-learning measuring scales did not provide clear evidences for evaluating service-learning outcomes from the perspectives of faculty and administration. Lu and Lambright (2010) narrated that service-learning is a practical teaching and learning approach that develops students' professional skills and prepare them for the work place. But, Daniel (2013) has recently indicated that there is lack of studies in the field of vocational education related to measuring the service-learning outcomes specifically in the field of technical and vocational career education. Steinberg, Bringle and Williams (2010) and Daniel (2013) have already raised questions on the quality of the existing service-learning measures. These writers believe that the existing measurement instruments in service-learning have been mostly limited to assessing students' development from traditional field of courses. Little attention has been paid to professional career and vocational field of education. For example, in one of the studies, the perspectives of faculty members were measured on the factors influencing service-learning utilization in social work using an online survey which also lacks clear validity and theoretical justification (Davis, Cronley, Madden, & Kim, 2014). In another study, Lu and Lambright (2010) assessed the views of public administration students about the factors affecting their learning outcomes.

Due to the theoretical and operational importance of service-learning approach, many scales have been used to document the outcomes of students' service-learning participation (Eyler & Giles, 1999; Gershenson-Gates, 2012). The results of these studies showed mixed results about students' service-learning outcomes, because, these assessments were limited to single item survey responses with few multiple items lacking the capacity to capture the complete picture of the situation (Moely, et al., 2002; Phillips, 2011). There is a need for further research to provide firm foundations to these previous findings. Other writers have also argued that rather than limiting the construct to a single

behaviour and attitude, a broader explanation may help in better understanding of students' service-learning outcomes (Gershenson-Gates, 2012). This study aimed to bridge this gap in the current service-learning literature by exploring the dimensions of service-learning scale.

## **Method**

### **Research Design**

This study followed survey research design for collecting data. Through survey method data were collected from larger sample in less time and more efficiently (Gay, 2003). More specifically, the perceptions of the respondents (students = 141) were approved through survey approach in vocational training institutes of Punjab, Pakistan.

### **Population and Sampling**

The target population for this study consisted of all those students who participated in service-learning projects in vocational training institutes of Punjab, Pakistan. All students who participated in the service-learning project were selected as sample purposively from those training institutes where service-learning course is integrated in the curriculum as a teaching and learning strategy.

### **Measure**

The service-learning scale was adopted from Lu and Lambright (2010). The scale was adapted to match with the conditions of the new context. For this purpose, it tested for face and content validity. Three experts (one from language department and two from social sciences) checked the scale and gave their feedback. Based on the feedback, the scale was refined in terms of language clarity for further use. Few items were redrafted to make it more understandable for the new respondents. The original scale consisted of 18 items. Permission was also obtained from the author for using this scale in the current study. There was no convincing proof about the scale's previous alpha reliability, hence, the scale was further piloted to assess its inter-item consistency and reliability alpha in the new context.

### **Procedure**

The study was conducted in three distinct phases. During phase 1 the scale was piloted. For this purpose, 30 students were approached from vocational training institutes who responded to the 18 items scale. Based on the test, the scale was further refined. In the second phase, factor analysis was conducted. For this purpose, exploratory factor analysis (EFA) was used to determine the factor

structure of the scale. The EFA was performed to empirically determine the number of constructs underlying the service-learning scale (DeVellis, 1991). To do this, principal component analysis was used as factoring method and data reduction technique (O'Rourke & Hatcher, 2013). Prior to extracting the factors, KMO and Bartlett's Test of sphericity were also performed for assessing sample adequacy to conduct factor analysis. Generally, KMO index is recommended when the cases to variable ratio are less than 1:5. The KMO index ranges from 0 to 1, with 0.50 being suitable for factor analysis and Bartlett's Test of sphericity needs to be significant  $p < .05$  (Islam, 2012).

### Phase 1: Pilot Testing

The scale was piloted tested before factor analysis. To check inter-item consistency and reliability of the instrument, Cronbach alpha test was conducted using SPSS version 21. Corrected item total correlation threshold .40 was used as threshold for retaining an item and Cronbach's alpha if item deleted was used to check the alpha point. Seven items were deleted being poor in terms of correlation and below .40 in the scale. Finally, the rest of the 11 items were retained in the scale meeting the threshold point. The overall alpha .84 was found for 11 items to at an acceptable level for the scale (Hinkin, 1995). Table 1 illustrates the item total statistics, further showing corrected item-total correlation that the values for all items are above .40 to retain items in the scale.

Table 1: *Item-Total Statistics*

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Statement1	27.14	41.375	0.655	0.587	0.819
Statement2	26.94	40.356	0.672	0.623	0.817
Statement3	27.12	40.985	0.693	0.573	0.816
Statement4	26.51	39.029	0.651	0.526	0.818
Statement5	27.19	43.409	0.502	0.545	0.831
Statement6	25.72	51.771	0.456	0.24	0.878
Statement7	27.09	43.365	0.499	0.415	0.841
Statement8	26.94	41.119	0.595	0.53	0.823
Statement9	26.18	43.054	0.461	0.245	0.835
Statement10	27.09	41.006	0.682	0.559	0.817
Statement11	27.06	41.205	0.675	0.494	0.818

### Phase 2: Exploratory Factor Analysis

Before conducting exploratory factor analysis, Kaiser-Myer-Olkin (KMO) and Bartlett's test of Sphericity were checked. The KMO analysis was used to

check the sampling adequacy and linear relation between the variables. The Eigen value criterion greater than 1 and scree test were used for determining the number of factors in the 11 items scale (DeVellis, 1991; Hinkin, 1995). Varimax rotation was used for interpreting the extracted factors. Loading factor having .40 was adopted as the criterion for retaining items in the three factors (Hinkin, 1995). Table 2 show KMO and Bartlett's Test of Sphericity.

Table 2: *KMO and Bartlett's Test*

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy</b>		<b>0.880</b>
Bartlett's Test of Sphericity	Approx. Chi-Square	859.693
	Df	55
	Sig.	.000

Table 2 show KMO 0.88 and Bartlett's Test of Sphericity.000 both meets the acceptable levels for conducting factor analysis. The Scree Plot illustrated in Figure 1 the plotting of Eigen value in descending order against their factor numbers determining where the Eigen value levels off. The inflection point between the steep slope and the leveling of the Eigen value shows the number of meaningful factors.

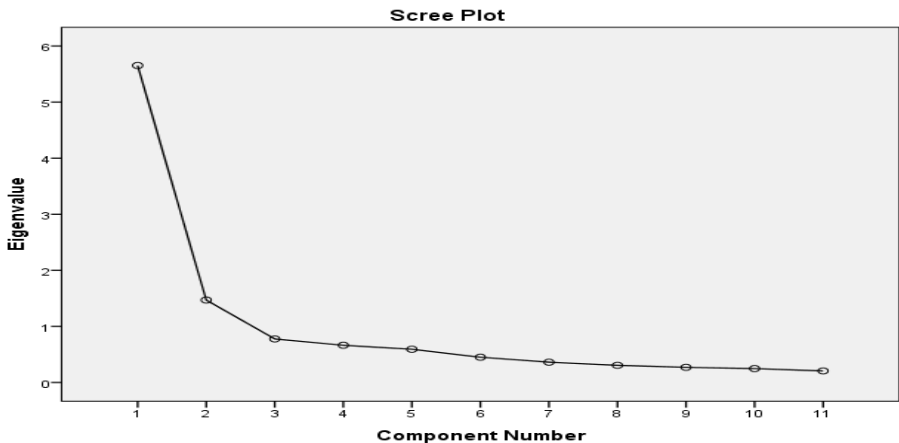


Figure 1 Scree Plot of Eigen Values

Table 3 indicates the total variance explained and factorization based on the 11 items in the scale. The first component explained 37.44 of the total variance in the scale. Based on the nature of the items it was named 'interpersonal skills'. The second factor explained 18.93 of the total variance in the scale. Based on the nature of the items it was named 'content knowledge'. The third factor explained 15.43 of the total variance in the scale. Based on the

nature of the items it was named 'volunteering attitude'. The total variance of the scale was 71.81 based on 11 items.

Table 2: *Total Variance Explained*

Component	Initial Eigen Values			Rotation Sums of Squared Loadings		
	Total	% of	Cumulative	Total	% of	Cumulative
		Variance	%		Variance	%
1	5.652	51.385	51.385	4.119	37.443	37.443
2	1.47	13.367	64.752	2.083	18.934	56.377
3	1.877	7.06	71.812	1.698	15.435	71.812
4	0.664	6.038	77.851			
5	0.593	5.387	83.237			
6	0.451	4.104	87.341			
7	0.362	3.289	90.63			
8	0.306	2.782	93.412			
9	0.27	2.459	95.871			
10	0.248	2.253	98.124			
11	0.206	1.876	100			

Table 4 explains the three factors and their respective factor loadings. The factor 1 consists of 4 items (Q1, Q2, Q3, Q4), factor 2 consists of four items (Q8, Q9, Q10, Q11) and factor 3 consists of three items (Q5, Q6, Q7) in the component rotated matrix. The matrix shows that all the factors have high factor loadings ranging from .44 to .88.

Table 3: *Rotated Component Matrix*

	Component		
	1	2	3
Q1	0.795		
Q2	0.676		
Q3	0.831		
Q4	0.829		
Q5			0.851
Q6			0.666
Q7			0.445
Q8		0.818	
Q9		0.436	
Q10		0.854	
Q11		0.886	



### Phase 3: Confirmatory Factor Analysis

The scales' construct validation was established through CFA. The CFA was computed in three stages. Firstly, all the items were plotted in the AMOS 21 graphics and the model fit was computed. The model fit estimation was done on the basis of different model fit indices: Chi-square / DF Ratio ( $< 5$ ), Goodness of Fit Index (GFI  $> .900$ ), Adjusted Goodness of Fit (AGFI  $> .800$ ), Root Mean Square Residual (RMR  $< .050$ ), Normed Fit Index (NFI  $> .900$ ), Comparative Fit Index (CFI  $> .900$ ), Tucker-Lewis Fit Index (TLI  $> .900$ ) and Root Mean Square Error of Approximation (RMSEA  $< .080$ ). The unidimensionality of the scale was tested using CFA. The SLS was measured on the basis of 11 items. Figure 2 shows the CFA for SLS showing items with adequate factor loadings meeting the required threshold range which is above 0.50 (Hair *et al.*, 1998). All the items showed perfect correlation with their respective variables ranging from 0.71 to 0.92 as shown in Figure 2.

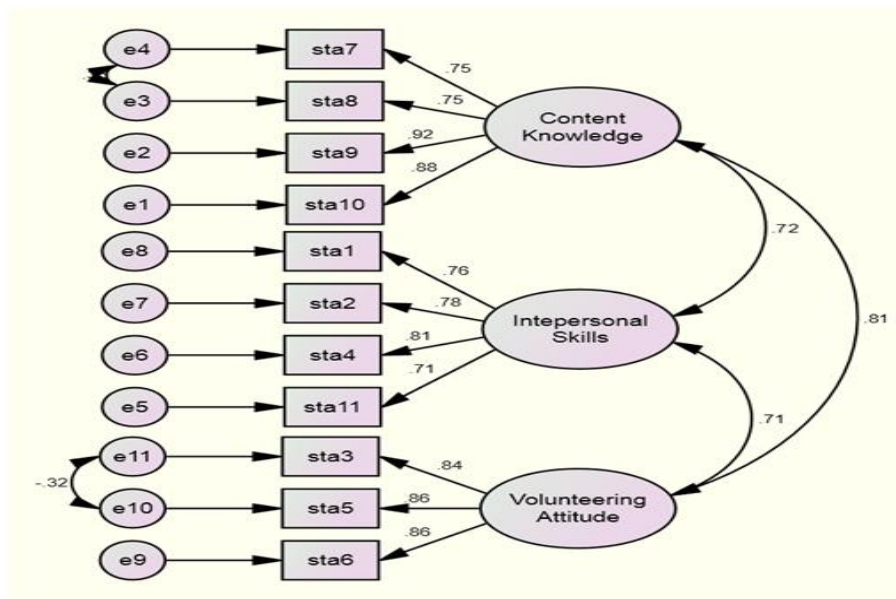


Figure 2: Measurement Model of the Study

Table 4 indicates the goodness of fit for SLS showing that all the items statistically good fit as  $\chi^2 = 150.31$ , Df = 24, CMIN/DF = 1.412, GFI = .947, AGFI = .901, TLI = .973, NFI = 0.95, CFI = .982 RMR = .051 and RMSEA = .054 and were within the acceptable ranges (Hair *et al.*, 2010).

Table 4 *Goodness of Fit Statistics*

Model Fit	Fitness Indices	Threshold Values	Achieved Values
Goodness of Fit	$\chi^2=$	----	150.31
	Df	----	24
	CMIN/df	<.5	1.412
	GFI	>.90	.947
	AGFI	>.80	.901
	TLI	>.90	.973
	CFI	>.900	.982
Badness of Fit	NFI	>.90	.928
	RMR	<.050	.051
	RMSEA	<.080	.054

### Convergent Validity

Table 5 shows that all values of factor loadings in the SLS were above 0.50. It also shows the AVE of each variable, and the result shows that all the variables were having convergent validity showing AVE ranging from 0.59 to 0.73 and construct reliability ranging from 0.85 to 0.89.

Table 5: *Convergent Validity Statistics*

Construct / Sub-Scale	Items	Factor Loadings	CR	AVE
Interpersonal Skills (IS)	sta1	0.76	0.85	0.59
	sta2	0.78		
	sta4	0.81		
	sta11	0.71		
Content Knowledge (CK)	sta7	0.75	0.89	0.69
	sta8	0.75		
	sta9	0.92		
	sta10	0.88		
Volunteering Attitude (VA)	sta3	0.84	0.89	0.73
	sta5	0.86		
	sta6	0.86		

### Discriminant Validity

Table 6 indicates that all the variables in the scale were had adequate discriminant validity, as the square root of AVE was larger than the inter-construct correlation of each variable. The inter construct correlation were less than .85 (Hair, Black, Babin, Anderson, & Tatham, 2009). It means the result provides enough evidence for discriminant validity for the scale.

Table 6: *Discriminant Validity Statistics*

<b>Sub-Constructs</b>	<b>CR</b>	<b>AVE</b>	<b>IS</b>	<b>CK</b>	<b>VA</b>
Interpersonal Skills (IS)	0.89	0.69	(0.83)		
Content Knowledge (CK)	0.85	0.59	0.72	(0.77)	
Volunteering Attitude (VA)	0.89	0.73	0.81	0.71	(0.85)

\* Square root of AVE is shown in parenthesis.

## **Discussion**

Keeping in view the worldwide use of service-learning scale in different settings to assess students' academic outcomes, it was important to validate the scale in Pakistani context. Previous research has used the scale in general education field but there were no evidence of its factor structure by EFA (Moely, et al., 2002; Phillips, 2011). To the best of our knowledge, assessment of the three-factor model by using SEM in order to specify the relationships among the observed and unobserved variables was made. We created a three-factor model based on Varimax rotation. For determining the psychometric features of the scale, specifying the three-factor model, identifying the model, assessing the fit was done through CFA method. After specification of the three-factor model, fit statistics showed that the model had a good fit to the data having best fit with the observed variables. The three-factor model is well identified as each factor has minimum three items that also meets the model identification requirement (Hair, et al., 2009). Based on the model identification, we named the factors 'interpersonal skills', 'content knowledge' and 'volunteering attitude' respectively as the items which loaded into these factors were well explained by these concepts.

The model assessment indicated that the hypothesized three-factor model for the SLS was a well fit for the students in Pakistan. From this, it can be concluded that the 11 items scale is valid and reliable for measuring vocational education students' attitude on service-learning participation in Pakistani context. The vocational education faculty and management may use the SLS for assessing vocational students' attitudes towards service-learning participation. The findings based on such assessment can be utilized for modifying the academic programmes and courses aiming at enhancing the vocational skills and knowledge of students.

In this study the researchers have not compared the findings of the study with previous research as there were no studies done in the context of Pakistan using CFA method or EFA approach and SEM for validating the SLS among vocational students. Hence, more studies are needed for comparing the results

of this study with future studies and testing the goodness of fit of the current three-factor model in other contexts.

## Conclusion

The findings of this study fully support the usefulness of SLS as a reliable, valid and psychometrically sound measure for assessing service-learning participation among vocational students in Pakistani context. A valuable model based on three factors emerged representing content knowledge, interpersonal skills and volunteering attitude in the context of vocational education which is very important for career development and professionalization of students in Pakistan. We recommend that other educational institutes such as medical and engineering not only in Pakistan but also in other countries may also use the SEM for further testing the current proposed three-factor model by using their own data sets. The findings of the current study further testify the usefulness of this method for analysis of student's service-learning participation.

## References

- Andrews, C. P. (2007). Service learning: Applications and research in business. *Journal of Education for Business*, 83(1), 19-26.
- Ansari, B., & Wu, X. (2013). Development of Pakistan's technical and vocational education and training (TVET): An analysis of skilling Pakistan reforms. *Journal of Technical Education and Training*, 5(2), 12-22.
- Ash, S. L., Clayton, P. H., & Atkinson, M. P. (2005). Integrating reflection and assessment to capture and improve student learning. *Michigan Journal of Community Service Learning*, 11(2), 33-45.
- Billig, S. H. (2002). Adoption, implementation, and sustainability of K-12 service-learning. *Advances in Service-Learning Research*, 1, 245-267.
- Billig, S. H., & Waterman, A. S. (2014). *Studying Service-Learning: Innovations in Education Research Methodology*: Routledge.
- Bringle, R. G., Phillips, M. A., & Hudson, M. (2004). *The Measure of Service Learning: Research Scales to Assess Student Experiences*. Washington, DC.: American Psychological Association.
- Brownell, J. E., & Swaner, L. E. (2000). *Five High-Impact Practices: Research on Learning Outcomes, Completion and Quality*. Washington, DC: Association of American Colleges and Universities.
- Burns, H., & Stokamer, S. (2011, January 28). *Cultivating student leaders through service learning*. Paper presented at the Annual Conference of Oregon Women in Higher Education, Portland, Oregon.

- Calvert, V., & Kurji, R. (2012). Service-learning in a managerial accounting course: Developing the soft skills. *American Journal of Economics and Business Administration*, 4(1), 5-12.
- Clark, J., & White, G. W. (2010). Experiential learning: A definitive edge in the job market. *American Journal of Business Education*, 3(2), 115-123.
- Daniel, C. A. (2013). *The Impact of Service-Learning on Community Involvement Attitude in Career and Technical Education Students*. Unpublished PhD Thesis, Liberty University, Lynchburg, Virginia.
- Davis, J., Cronley, C., Madden, E. E., & Kim, Y. K. (2014). Service-learning use in criminal justice education. *Journal of Criminal Justice Education*, 25(2), 157-174.
- Dean, B. L. (2005). Citizenship education in Pakistani schools: Problems and possibilities. *International Journal of Citizenship and Teacher Education*, 1(2), 35-44.
- DeVellis, R. F. (1991). *Applied Social Research Methods Series, Scale Development: Theory and Applications* (Vol. 26): Thousand Oaks, CA, US.
- Ewelt, B. (2013). Community-based learning project teaches marketing students skills employers desire. *Jesuit Higher Education: A Journal*, 2(2), 141-147.
- Eyler, J., & Giles, J. D. E. (1999). *At a Glance: What We Know about the Effects of Service-Learning on Students, Faculty, Institutions and Communities*: Vanderbilt University: 1993-1999.
- Falk, A. (2012). Enhancing the team experience in service learning courses. *Journal for Civic Commitment*, 2(18), 1-12.
- Fisher, D. R., Bagiati, A., & Sarma, S. (2014, June 15-18.). *Fostering 21st century skills in engineering undergraduates through co-curricular involvement*. Paper presented at the 121st Annual ASEE, Indianapolis, Indiana.
- Gay, L. R. (2003). *Educational Research: Competencies for Analysis and Applications*. Upper Saddle River, NJ: Merrill Prentice Hall.
- Gershenson-Gates, R. (2012). *The Impact of Service-Learning on College Students' Civic Development and Sense of Self-Efficacy*. Unpublished PhD Thesis, College of Science and Health, DePaul University, Chicago, IL.
- Greenman, A. (2014). *The Effects of Experiential, Service-Learning Summer Learning Programs on Youth Outcomes*. Unpublished PhD Thesis, North Eastren University, Huntington Bostan.

- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). *Multivariate Data Analysis* (7th ed.): Pearson.
- Hina, K. B., Ajmal, M., Rahman, F., & Jumani, N. B. (2011). State of citizenship education: A case study from Pakistan. *International Journal of Humanities and Social Science*, 1(2), 37-43.
- Hinkin, T. R. (1995). A review of scale development practices in the study of organizations. *Journal of Management*, 21(7), 967-988.
- Jacoby, B. (2013). Democratic dilemmas of teaching service-learning: Curricular strategies for success. *Journal of College Student Development*, 54(3), 336-338.
- Jerome, L. (2012). Service learning and active citizenship education in England. *Education, Citizenship and Social Justice*, 7(1), 59-70.
- Kenworthy-U'Ren, A. L. (2008). A decade of service-learning: A review of the field ten years after JOBE's seminal special issue. *Journal of Business Ethics*, 81(4), 811-822.
- Levesque-Bristol, C., Knapp, T. D., & Fisher, B. J. (2011). The effectiveness of service-learning: It's not always what you think. *The Journal of Experiential Education*, 33(3), 208-220.
- Lu, Y., & Lambright, K. T. (2010). Looking beyond the undergraduate classroom: Factors influencing service learning's effectiveness at improving graduate students' professional skills. *College Teaching*, 58, 118-126.
- Moely, B. E., Mercer, S. H., Ilustre, V., Miron, D., & McFarland, M. (2002). Psychometric properties and correlates of the Civic Attitudes and Skills Questionnaire (CASQ): A measure of students' attitudes related to service-learning. *Michigan Journal of Community Service Learning*, 15-26.
- Ngai, S. S. Y., Cheung, C. K., Ngai, N. P., & Chan, K. B. (2010). Building reciprocal partnerships for service-learning: The experiences of Hong Kong secondary school teachers. *Child & Youth Services*, 31(3-4), 170-187.
- O'Connor, J. S. (2006). Civic engagement in higher education. *Change: The Magazine of Higher Learning*, 38(5), 52-58.
- O'Rourke, N., & Hatcher, L. (2013). *A Step-by-Step Approach to Using SAS for Factor Analysis and Structural Equation Modeling*: Sas Institute.
- Phillips, J. M. (2011). Integrating service learning into the classroom: Examining the extent to which students achieve course objectives and a sense of civic responsibility by engaging in service learning Retrieved May 13, 2018, from [eric.ed.gov/?id=ED533766](http://eric.ed.gov/?id=ED533766).

- Sarkees-Wircenski, M., & Scott, J. L. (2003). *Special Populations in Career and Technical Education*. Homewood, IL: American Technical Publishers.
- Steinberg, K. S., Bringle, R. G., & Williams, M. J. (2010). Service-Learning Research Primer (pp. 1-69): IUPUI Center for Service and Learning
- Vandzinskaite, D., Mazeikiene, N., & Ruskus, J. (2010). Educational impact of service-learning: Evaluation of citizenship and professional skills development. *Socialiniai Mokslai*, 3(4), 70-81.