

Mayerson Student Philanthropy: Recommendation for a Newly Developed Measurement

May 2020

Jackie Saker, M.S. Industrial/Organizational Psychology '20

Jacob Noblick, M.S. Industrial/Organizational Psychology '20

Jordan Visser, M.S. Industrial/Organizational Psychology '20

Luis Hernandez, M.S. Industrial/Organizational Psychology '20

Dr. Philip Moberg, Ph.D. Industrial/Organizational Psychology '96

In partnership with the Scripps Howard Center for Civic Engagement at Northern Kentucky
University

Table of Contents

Note to Sponsor.....	3
Executive Summary.....	4
Background and Statement of the Problem.....	5
Constructs.....	6
The Purpose of an Exploratory Factor Analysis.....	10
Method.....	11
Inspecting the Data.....	11
Forming Groups.....	12
Exploratory Factor Analysis.....	13
Results.....	15
Attitudes, Beliefs, Values, and Intentions.....	15
The Effect of the Mayerson Class Experience.....	18
Recommendations.....	19
References.....	22
Appendices.....	24

Note to Sponsor

We would like to take a moment to thank the Scripps Howard Center of Civic Engagement and the Masters of Industrial and Organizational Psychology program at Northern Kentucky University for the opportunity to lead this project. A special thanks to Mark Neikirk and Dr. Kajsa Larson for their guidance and support in shaping this project, without their insights this project would not have been possible. A final thank you to Dr. Philip Moberg for his involvement in the project and willingness to always lend a helping hand and a listening ear.

Executive Summary

Current graduate students of the Master of Science in Industrial-Organizational Psychology program at Northern Kentucky University consulted Dr. Kajsa Larson and Mark Neikirk, sponsors for the Scripps-Howard Center for Civic Engagement, in regards to their Mayerson Student Philanthropy Project assessment tool. The purpose of the capstone project was to evaluate, investigate, and provide recommendations for a new Mayerson Student Philanthropy Project assessment tool. The Scripps-Howard Center has been using the current assessment tool for the last 20 years to collect information about attitudes, beliefs, values and intentions towards philanthropy and the effect of the Mayerson class experience. An exploratory factor analysis of the data found that there are inconsistencies in factor structure between the Pretest and Posttest, and across groups (e.g., college and focus of study). Based on the findings from the analysis of the data, interviews with staff involved with the Mayerson project, and a review of the literature, a new measurement tool was developed for consideration to use moving forward.

Background and Statement of the Problem

The Mayerson Student Philanthropy Project is an initiative housed in Northern Kentucky University's Scripps Howard Center for Civic Engagement and was developed in 1999 as a way to teach students about the activities of local nonprofit organizations and philanthropy. NKU students learn about nonprofits and philanthropy hands-on, following a "learn by giving" approach. In this approach, students have the opportunity to evaluate local nonprofits and invest a sum of money into nonprofits that would make effective use of the funds. During the evaluation stage, students learn about the needs of their community, the important impact nonprofits have, and engage in scholarly activities that combine the course work of the class and philanthropic missions. The goal of the Mayerson Student Philanthropy Project is to develop NKU graduates who remain life-long stewards in their communities. Additionally, this hands-on learning approach ideally promotes greater student engagement in the classroom and community, enhances learning, and improves student retention at NKU.

To measure the benefits of the Mayerson Project, pretest and posttest surveys were designed to assess the following dimensions: stewardship, classroom engagement, community engagement, and intention to stay. These dimensions are measured as attitudes, intentions, and/or behaviors. Attitudes reflect the values and beliefs that underlie an individual's disposition toward a certain concept (Lee, 2011). Intention refers to an individual's likelihood of participating in a specific activity while behavior refers to an individual's actually engaging in those specific actions (Lee, 2011). In the surveys, the stewardship dimension is defined using attitudes and intentions, the individual's feeling of responsibility to the community, and the individual's likelihood of engaging in activities that protect the community's wellbeing. Classroom engagement is measured using behavioral and attitudinal questions, such as how the individual

participates in the classroom and their belief in the importance of that participation. Likewise, community engagement is also measured using attitude, the individual's desire to learn about the needs in the community, but also intentions, the individual's likelihood of bringing positive change to meet those needs. While, intention to stay is measured using intentional questions, based on the individual's likelihood to complete their degree at NKU. In the posttest survey, two additional dimensions, community awareness, and Mayerson experience also are assessed. Community awareness, the participants' understanding of the needs in their community, is measured as a behavior. The participant's involvement with and feeling toward the Mayerson Project, is measured both as a behavior and an attitude.

Constructs

Although stewardship as a concept in social science research has a number of varying definitions, they do tend to contain similar themes and components. One of the most commonly used and empirically validated interpretations proposes four basic principles to stewardship: reciprocity, responsibility, reporting, and relationship building. In the context of non-profit organizations' efforts to gather donor support, these four principles of stewardship have been identified as critical (Li, et al, 2019). A more general description of stewardship used by some researchers is a collectively minded attitude and behavior of being in the service of others and putting the common good above one's own (Dominguez, et al, 2019). As part of our pursuit to define our constructs, we had several discussions with Mark Neikirk at the Scripps Howard Center for Civic Engagement in which an idea of "stewardship of community" was determined to be a central component of what we would be trying to measure. Mark described Stewardship of place "as to care about where you live, to take ownership with other members of the community of the needs and concerns for your place." and "Place" is probably best thought of

as ‘community’ and that could be geographic (a neighborhood in Newport, for example), a group (immigrants living in our region, for example, or families with special needs children, etc.) or even a topical community (e.g., addressing a region’s heroin epidemic).” (M. Neikirk, personal communication, 2020). To best encapsulate these varying definitions in a way which serves the needs of Scripps Howard, stewardship has been conceptualized as attitudes and beliefs related to one's responsibility to care for, and improve one's community. Standing on these constructs can be examined before and after the service learning project to evaluate the effect it had on the importance of stewardship to the individual student.

One construct frequently measured in organizational research settings is engagement. Engagement refers to “a positive, fulfilling, and work-related state of mind that is characterized by vigor, dedication, and absorption” (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). There were two types of engagement identified for the Mayerson project, classroom engagement and community engagement. Classroom engagement, similar to academic engagement, generally refers to “academic-related processes in which students engage in their schooling” (Chen, 2005). This type of engagement refers to behavioral processes such as demonstrating the appropriate classroom conduct and instrumental processes such as time spent working on homework (Chen, 2005). Classroom engagement is a common theme among higher education because it deals with the student’s individual willingness to participate in class discussions and to be engaged with the material. Much of the literature suggests that it is the role of the teacher to help create an environment in which students are challenged and feel comfortable to ask questions (Savory, Goodburn, & Kellas, 2012). Based on the literature and Mark Neikirk’s definition of classroom engagement, it was defined as an individual’s active participation in learning class content as well as interacting with others in the classroom. This refers to how much the student participates

in class over the span of the semester with the implementation of the Mayerson Student Philanthropy project component. This also refers to how active the student is with other students and if they engage in classroom discussions or general discussions about the service project.

The other type of engagement defined for this project was community engagement. Community engagement differs slightly from the civic engagement and the notion of community service. Although scant literature defines community engagement in a service learning environment, it can generally be defined as a way “to better engage the community to achieve long-term and sustainable outcomes, processes, relationships, discourse, decision-making, or implementation” (What is Community Engagement? n.d.). The construct assessed in this project focuses more on student attitudes and intentions. Community engagement differs from the idea of community service because engagement is not simply about having students volunteer more. Based on what literature could be found along with the definition that Mark Neikirk provided, we defined community engagement as an individual’s desire to learn about the needs of their community and intent to bring positive change to meet those needs. The Mayerson Project aims at encouraging students to be more involved in addressing the needs of the community. The goal was to connect the students to their communities by understanding the needs of their community and learning how to address those needs in a productive and effective way.

In organizational psychology, intention to stay refers to an employee’s level of commitment to their organization and their willingness to remain employed (Mustapha, Ahmad, Uli, & Idris, 2011). When applied to education, intention to stay refers to a student’s level of commitment to the completion of their degree and their willingness to stay at their current institution. Based on the definition of intention to stay in academic literature and Mark Neikirk’s, Executive Director of NKU’s Scripps Howard Center, understanding of the scope of intention to

stay in relation to the Mayerson Project, intention to stay can be understood as both persistence and retention. Retention refers to the short-term aspect of intention to stay and relates to students' commitment and willingness to come back to NKU on a semester by semester basis. Persistence is the long-term aspect of intention to stay and refers to students' commitment and willingness to stay at their institution to receive their degree. Involvement in the Mayerson Project is believed to increase students' intention to stay, by connecting students to the community through exploring local nonprofits to increase students commitment to and willingness to stay in the community. The Mayerson Project also provides hands-on experiences in learning course material, connecting the students more strongly to what is being learned in the classroom, and increasing both their commitment-and willingness to stay.

The purpose of a survey is to capture participants' attitudes, feelings, and/or perceptions about specific topics to understand what's making an impact on important outcomes such as intent to stay, classroom engagement, and community engagement. An important component of a survey is the validity of items measuring the intended focus as they will impact insights that can be drawn from the data analysis. This is dependent on the extent to which participants interpret the items in a conceptually similar manner, and this becomes crucial if different groups (e.g., students from the College of Business and Arts & Sciences) are taking the survey. Because of these reasons, it is essential to have a valid and reliable survey that has the statistical properties that will provide meaningful insights into the topics being evaluated. A first step for establishing a measurement's psychometric properties is by conducting an Exploratory Factor Analysis (EFA) of response data.

The Purpose of an Exploratory Factor Analysis (EFA)

The purpose of an EFA is to analyze the relationships (i.e., correlations) in a set of items in a survey (Tabachnick & Fidell, 2013). Items that are highly interrelated form factors meaning that they are interpreted in a conceptually similar way by participants. Interpretation and naming of the factors depend on the common theme/s of the items that comprise the factor. Conducting an EFA on a survey's items helps answer important questions concerning the number of constructs (i.e., factors) being measured, the interpretation of these factors, and if the same pattern of factors is found consistently across different groups.

How many factors are in the Mayerson Philanthropy survey? The primary question seeks to answer the nature of how participants are interpreting the items and the number of factors contained in the survey. This information is helpful for understanding the potential constructs being measured by the survey. This is the first step in uncovering the usability of the Philanthropy survey.

Are the factors found consistently across different groups of students? This survey has been administered to students from varied disciplines. Each college at Northern Kentucky has different areas of specialties that reflect different perspectives and each has its own unique history. Because of this, students' interpretations of survey items may be influenced by the perspectives in what they are studying. Taking this into consideration, the factors, in theory, should be found consistently across different groups which would indicate that students across disciplines interpret the items in a conceptually similar manner. For this question, we are interested in establishing measurement invariance and avoiding construct bias. Lee (2018) described measurement invariance as participants from different groups interpreting the items within a measure in a conceptually similar manner. Furr (2018) defined construct bias as occurring when a survey has a

different meaning for different groups. If the factors are found consistently across different groups of students, then the survey is said to have measurement invariance and the items are said reflect the same meaning for all students who complete the survey at NKU.

What constructs do the factors in the Mayerson Philanthropy survey represent? Depending upon the findings to the two previous questions, if the survey demonstrates measurement invariance then the final step is defining the factors that are revealed. This information is useful to describe what the items in the survey are statistically and conceptually measuring. The process is involves finding a consistent theme shared by the set of items that form a factor that can be interpreted to represent a potential construct.

Method

Inspecting the Data

An EFA examines correlations to understand the relationships between the items in a survey. A limitation of correlation analysis is that it is dependent on having an adequate sample size. If this requirement is not met then the analysis will produce less reliable estimates (Tabachnick & Fidell, 2013). Following the guidelines established by Schultz, Whitney, and Zickar (2014), it is recommended to have a sample size of at least $(5 \times \text{\#items}) + 100$ to conduct an EFA. This means that for the Pretest EFA, the minimum required sample size is $N = 175$ and for the Posttest, which includes additional items, is $N = 220$.

The total number of participants who submitted Pretest surveys was $N = 2,550$ and $N = 2,207$ for the Posttest survey. The data was inspected for missing responses and normality in the distribution as determined by skewness and kurtosis analysis. Participants with an excess amount of missing data can indicate potential response biases that distort interpretation, if included. The number of missing responses ranged from 1 (skipped one item) to 42 (did not answer any items).

This is problematic because it impacts analysis and may produce less reliable findings. Because of this, all cases that were missing 3 or more responses were removed and those missing 1 or 2 responses were replaced by the missing items' overall group means. The final sample size for the Pretest survey was $N = 2,035$ and $N = 1,738$ for the Posttest survey, which satisfy the minimum required sample sizes of 175 and 220, respectively.

Next, the items were inspected for normality by conducting a skewness and kurtosis analysis. Skewness and kurtosis issues limit analysis and interpretation, and impact estimations. It is recommended by Tabachnick and Fidell (2013) to apply one of three transformations – Square Root (moderate issues), Logarithmic, and Inverse (severe issues) to correct for skewed or kurtotic data distributions. The analysis found that most of the items had some degree of skewness and kurtosis issues. However, when each transformation was applied in an effort to achieve normally distributions of data, the issues worsened. Because of this, no transformations were applied and the items remained in raw format for analysis.

Forming Groups

Additional groups were created to analyze for measurement invariance grouped by college or academic focus. For the college groups, the course demographic information was used to first verify the abbreviation and section numbers appearing in Northern Kentucky's course – catalog. Next, the course's college was confirmed using Northern Kentucky's academic website. This website provides links to all the colleges with a list of majors and classes. Three of the seven college groups met the minimum required sample size for the Pretest ($N = 175$) and Posttest ($N = 220$) to conduct an EFA. Business ($N = 84$ and 83), Education ($N = 109$ and 106), Honors ($N = 44$ and 41), and School of the Arts ($N = 93$ and 79) did not meet the sample size

requirement. To include these responses, we decided to combine all four groups into one sample for analysis. A summary of the college groups sample information is provided in Table 1.

Table 1. *Sample Size (N) of College Groups*

College	Pretest <i>N</i> *	Posttest <i>N</i> **
Arts & Sciences	982	784
Health & Human Services	436	403
Informatics	287	242
Other (Business, Education, Honors, and School of the Arts)	330	309
Total	2035	1738

Note: The "Other" group reflects courses that were combined to meet the minimum required sample size (175* and 220**) needed to conduct a stable EFA.

For the Focus of Study groups, the courses were inspected for commonalities in content based on the data analyst subjective judgment. For example, English, Spanish and German courses were grouped together to represent “Language Studies” and Organizational Leadership, Entrepreneurship, Marketing, and Business Informatics as “Business Studies”. As previously noted, the minimum required sample size (i.e., Pretest *N* = 175, Posttest *N* = 220) was taken into consideration when forming these groups. All groups met the minimum required sample size with the exception of the Society and Human Studies (*N* = 216) and Business Studies (*N* = 218) groups in the Posttest survey. Because the difference was minimal we decided that these two groups would be included in the analysis. A summary of the Focus of Study groups sample size information along with the group’s courses sample size is provided in Table 2.

Exploratory Factor Analysis

Three sets of exploratory factor analysis (EFA) with principal axis factoring using direct oblimin rotation were performed each with three different groups. The first set of EFA’s was performed using the Pretest items (15 total) aiming to measure attitudes, beliefs, values, and intentions towards philanthropy. The groups include Overall (everyone that took the survey), by

College (based on course listing on Northern Kentucky University website), and by Focus of Study (subjectively assigned based on commonalities among courses). This methodology was applied for the second set of EFA's using the Posttest items (15 total) measuring attitudes, beliefs, values, and intentions towards philanthropy. The final set of EFA's performed used the Posttest items (24 total) aiming to measure the effect of the Mayerson class experience. This set of EFA's includes the same groups discussed previously. In total, nine EFA's were performed to analyze the factor structure of the Mayerson Philanthropy survey.

Dr. Philip Moberg (2020, personal communication), provided three guidelines for identifying items that represent the factors uncovered. The first guideline is that if an item has a loading of .35 or greater on a factor then it is included as representing that factor. However, if the item cross-loads at .30 or greater on another factor then it is unclear to which factor the item "belongs" and it is excluded. The second guideline is that if an item loads at .30 or less on a factor it is considered as not representing that factor. Finally, the third guideline is that if an item has a loading between .30-.35 then the item is considered to be ambiguous in terms of factor identity and should be either disregarded or rewritten for future administration. The guidelines will serve as the foundation for interpreting the exploratory factor analysis and discussing the factors that emerge.

Table 2. Sample Size of Groups by Focus of Study

Groups by Focus of Study and Course Information	Pretest <i>N</i>	Posttest <i>N</i>
Language Studies	373	324
English	226	191
Spanish	114	102
German	33	31
Assisting Professions Studies	436	403
Social Work	276	265
Human Services/Mental Health	67	61
Nursing	93	77

Society and Human Studies	247	216
Communication Studies	188	158
Anthropology	40	39
Psychology		
	19	19
Business Studies	287	218
Organizational Leadership	172	110
Entrepreneurship	18	14
Marketing	66	69
Business Informatics		
	31	25
Public Services Studies	282	220
Criminal Justice	113	88
Public Administration	70	61
History	99	71
Other Studies	410	357
Honors	44	41
Library Informatics	68	59
Theatre and Dance	93	79
Environmental Science	94	72
Education	109	106
Geography	2	0
Total	2035	1738

Note: Posttest groups of Society and Human Studies and Business Studies did not meet the required sample size to conduct an EFA ($N = 220$). However, the difference was minimal and both groups were retained for analysis.

Results

Attitudes, Beliefs, Values, and Intentions

In this section, an exploratory factor analysis with principal axis factoring and direct oblimin rotation was performed on the 15 items measuring attitudes, beliefs, values, and intentions towards philanthropy. Two separate EFA's were performed, one using the items from Pretest surveys and a second using items from the Posttest surveys. The Posttest analysis included all participants representing the aggregate sample group. This was followed by several additional EFAs conducted using data representing Colleges and Focus of Study groups and for measurement invariance analysis.

Pretest and Posttest Aggregate Group Findings

For the Pretest EFA, three factors were found and item Q2_12 did not load onto any of the factors. Based on the common themes identified in items forming each factors, Factor 1 reflects attitudes and beliefs towards proactivity (9 items). Items in this factor are based on making a positive contribution in different aspects of life (e.g., community, education). Factor 2 reflects Community Awareness (2 items) and Factor 3 reflects Charitable Investment (3 items) (Appendix A).

For the Posttest EFA, two factors were found and item Q2_03 did not load onto any of the factors. Factor 1 reflects philanthropic orientation (11 items) representing views and intentions towards giving back. Factor 2 reflects knowledge disposition (3 items) but it's important to note that item Q2_05 may not completely represent this theme (Appendix A).

Comparing the pretest and posttest EFA findings, Factor 1 had similar items, however, the items that loaded on Factor 3 (Q2_13, Q2_14, Q2_15) in the pretest loaded on Factor 1 in the posttest. Additionally, Factor 2 in the posttest included item Q2_05 which loaded on Factor 1 in the Pretest. These findings demonstrate construct bias as the factor structure was different for the Pretest overall group and the Posttest overall group. Appendix A provides a summary of these findings.

Pretest and Groups Findings

Comparing factor structure of the aggregate group with the College groups, Factor 1 (attitudes and beliefs towards proactivity) was found in three of the four groups with minor differences. Those groups were the Arts & Sciences (cross-loaded item, Q2_11), Health & Human Services, and Other (cross-loaded item, Q2_05). Factors 2 (community awareness) and 3 (charitable investment) were found in all groups. However, item Q2_11 in Factor 3 for the

groups of Arts & Sciences and Informatics cross-loaded with Factor 1. Overall, the findings demonstrate measurement invariance when comparing the College groups' factors with the Overall Pretest group's factors. In other words, the same factors were found in each of the College groups samples suggesting that the factors measured by the current scale appear in the same way across very different academic colleges. Appendix B provides a summary of these findings.

Comparing group results by Focus of Study, Factor 1 (attitudes and beliefs towards proactivity), was found in four of the six groups with minor differences. Those groups were Language Studies (cross-loaded items, Q2_06 and Q2_11), Assisting Professions studies (Q2_12 did not load for the Overall group), Business studies (item Q2_06 did not load), and Other studies. Factor 2 (community awareness) was found across all groups and Factor 3 (charitable investment) was found in four of six groups with minor differences. For Factor 3, those groups were Assisting Professions studies, Society & Human studies (Q2_15 did not load), Business studies, and Other studies. Overall, the findings demonstrate general consistency but not measurement invariance when comparing the Focus of Study groups' factors with the Overall Pretest group's factors. In other words, the factors are measuring similar, but not the exact same construct across Focus of Study groups. Appendix C provides a summary of these findings.

Posttest and Groups Findings

Comparing by College, Factor 1 (philanthropic orientation) was found in two of the four groups – Arts & Sciences (cross-loaded item, Q2_10) and Informatics. Factor 2 (knowledge disposition) was not found in any of the groups. Overall, the findings demonstrate construct bias when comparing the College groups' factors with the Overall group's factors. Appendix D provides a summary of the findings.

Comparing by Focus of Study, Factor 1 (philanthropic orientation) was found in four of the six groups with minor differences. Those groups were Language studies (cross-loaded item, Q2_10; item Q2-03 did not load for the Overall group), Society & Humanities studies (item Q2-03 did not load for the Overall group), Business studies, and Other studies. Factor 2 (knowledge disposition) was found in four of the six groups with minor differences. Those groups were Language studies (cross-loaded item, Q2_10), Society & Humanities studies, Business studies (Q2_03 did not load for the Overall group), and Other studies (Q2_03 did not load for the Overall group). Although similar constructs were found, the results do not demonstrate measurement invariance when comparing Focus of Study group factors with the Overall Posttest group factors. Appendix E provides a summary of these findings.

The Effect of the Mayerson Class Experience

An EFA with principal axis factoring and direct oblimin rotation was performed on the 24 items measuring the effect of the Mayerson Class Experience. The first EFA was performed with all participants representing the aggregate Overall group followed by the groups representing Colleges and Focus of Study subsamples for measurement invariance analysis.

Findings

Factor 1 in the Overall group was made up of 15 items that reflect several theme. Those reflect knowledge assessment (Q3_1, Q3_2, Q3_8, Q3_10, Q3_16, Q3_17) philanthropic engagement (Q3_3, Q3_4, Q3_5, Q3_6, Q3_7, Q3_15, Q3_18, Q3_19), and academic achievement (Q3_9). Factor 2 in the Overall group was made up of 9 items reflecting communal responsibility (Q3_11, Q3_12, Q3_20), classroom engagement (Q3_13, Q3_14), philanthropic intentions (Q3_21, Q3_22, Q3_23, Q3_24). Neither Factors 1 nor 2 were found in the College groups (Appendix F) or Focus of Study groups (Appendix G) when compared to the aggregate

Overall group's factors. These inconsistencies demonstrate that the factors measured in the current survey are unstable and change across samples. In other words, the current survey measures different constructs in different samples, rather than consistently assessing one common constructs, providing clear evidence of construct bias and the need for revision or replacement.

Recommendations

An exploratory factor analysis provides evidence of how participants interpret items in a survey. Based on participant responses, correlated items cluster into factors that represent a potential construct. Additionally, if the survey will be administered across different groups then comparing these factors across samples by performing a measurement invariance analysis will provide evidence whether participants from different groups interpret items similarly. Ideally, for a rigorously-developed scale, items should be interpreted similarly by all respondents. For the current survey, in which items assess attitudes, beliefs, values, and intentions towards philanthropy, comparing the factors that emerged from College and Focus of Study groups with the factors that emerged from the aggregate Overall group on both Pretest and Posttest surveys revealed consistency in evidence of factor similarity, but not measurement invariance. In other words, the current survey measures somewhat different constructs in different samples, clear evidence of measurement bias. However, differences in interpretation in the Pretest and Posttest were found in the aggregate Overall sample for the Pretest and Posttest items measuring attitudes, beliefs, values, and intentions. This indicates that participants are not interpreting the items in a consistent manner that represent similar factors thus raising issues of construct bias. This is important to take into consideration due to the efforts of the Mayerson Group in analyzing students' change in philanthropy perceptions and awareness during the semester across

diverse projects, academic classes, universities, and settings. Additionally, the items measuring the effect of the Mayerson Class Experience demonstrated construct bias for all groups.

Optimally, the same items would be expected to assess the same constructs across settings.

Given the findings from the exploratory factor analysis demonstrating inconsistencies between the Pretest and Posttest for the sections measuring attitudes, beliefs, values, and intentions and the effect of the Mayerson Class Experience, we have developed a new survey for consideration moving forward. We have taken into consideration your concerns, have provided statistical evidence, and researched constructs of interest to provide a survey that we believe will more reliably and validly measure the intended constructs of interest. Based on conversations with Mark about the needs for survey measurement, literature on student philanthropic projects, and the team's own judgement, scale items based on stewardship, classroom and community engagement, intention to stay, community awareness, and Mayerson experience were created. These items were written as attitudinal, intentional, and behavioral measures based on academic definitions of each construct. Through the synthetization of the previous Mayerson surveys, academic assessments that measure engagement and intention to stay, and our team collaboration, the scale items were created (Mustapha, Ahmad, Uli, & Idris, 2011; Tabachnick & Fidell, 2013). The EFA provided findings that were mostly too broad and conflated to narrow down to specific items, but the major themes the factors tended towards, including stewardship, engagement, and awareness are reflected in the new items created.

We believe this new survey will better serve the purposes of the Scripps Howard Institute because we have clearly defined a series of constructs which we believe will constantly hang together in analysis. These constructs, as previously stated, consist of stewardship, classroom and community engagement, intention to stay along with items for community awareness and the

Mayerson experience. The propose survey (Key, Appendix J) will allow for a better comparison of the levels of changes in these constructs between the pre-project (Appendix H) and post-project (Appendix I) surveys. Further, we invested considerable effort to construct items that are straightforward and more clear in meaning, and less likely to be misunderstood. We also attempted to construct the scale items in an effort to make them universally applicable across all academic disciplines. The short answer questions also were revised to try to provide additional insights and context to support responses to the closed-ended scale items. We hope that these insights will provide the Scripps Howard Institute with expanded details about the students' experience they are attempting to gain.

The most important next step for this proposed survey is to be administered in a pilot study to examine the scale's validity, reliability, and factor structure. Further, it will be important to administer the proposed scale across a variety of academic disciplines involving different types of projects to allow the question of factor stability to be examined. In this way, the need for further revision or modification can be identified before the scale is make widely available for use.

References

- Chen, J. J.-L. (2005). Relation of academic support from parents, teachers, and peers to Hong Kong adolescent's academic achievement: The mediating role of academic engagement. *Genetic, Social, and General Psychology Monographs*, 131(2), 77-127. Doi:10.3200/mono.131.2.77-127
- Domínguez-Escrig, E., Mallén-Broch, F. F., Lapiedra-Alcamí, R., & Chiva-Gómez, R. (2019). The influence of leaders' stewardship behavior on innovation success: The mediating effect of radical innovation. *Journal of Business Ethics*, 159(3), 849–862.
<https://doi.org/10.1007/s10551-018-3833-2>
- Furr, R. M. (2018). *Psychometrics: An Introduction* (3rd Edition). Thousand Oaks, CA: Sage Publications.
- Kaman Lee (2011). The role of media exposure, social exposure and biospheric value orientation in the environmental attitude-intention-behavior model in adolescents, *Journal of Environmental Psychology*, 31(4), <https://doi.org/10.1016/j.jenvp.2011.08.004>.
- Lee, S. T. (2018). Testing for measurement invariance: Does your measure mean the same thing for different participants? *Association for Psychological Science*. Retrieved from <https://www.psychologicalscience.org/observer/testing-for-measurement-invariance>
- Li, P., Men, L. R., & Yue, C. A. (2019). An exploratory study of stewardship for chinese nonprofit organizations. *International Journal of Nonprofit and Voluntary Sector Marketing*. <https://doi.org/10.1002/nvsm.1655>
- Mustapha, N., Ahmad, A., Uli, J., & Idris, K. (2011). Work-family facilitation and family

satisfaction as mediators in the relationship between job demands and intention to stay.

Asian Social Science, 7(6). doi: 10.5539/ass.v7n6p142

Schaufeli, W. B., Martínez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students. *Journal of Cross-Cultural Psychology*, 33(5), 464

Schultz, K. S., Whitney, D. J., & Zickar, M. J. (2014). *Measurement Theory in Action: Case Studies and Exercises*, Second Edition. New York, NY: Routledge.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics* (6th ed.). Pearson.

What is Community Engagement? (Center for Economic and Community Development).

(n.d.). Retrieved from <https://aese.psu.edu/research/centers/cecd/engagement-toolbox/engagement/what-is-community-engagement>

Appendix A

Factors and Items Emerging from EFA of Pretest and Posttest Survey Data for Overall Sample

Factor Content		Pretest Overall			Posttest Overall	
#Item	Item	1	2	3	1	2
Q2_03	I am interested in this course.	.745	-.020	-.126	.374	.382
Q2_04	I am interested in student philanthropy or service learning.	.797	-.008	-.069	.596	.238
Q2_05	I want to stay in college or complete my degree.	.420	-.065	.017	.265	.453
Q2_06	I am interested in belonging to and participating actively in a group or association.	.552	.002	.141	.628	.120
Q2_07	I plan to work with someone or some group to solve problems in my community.	.665	.095	.068	.768	.035
Q2_08	I have a responsibility to help others in need.	.639	.065	.097	.705	.156
Q2_09	I have a personal responsibility to the community in which I live.	.580	.137	.088	.703	.141
Q2_10	I believe that I can make a difference in the world.	.547	.039	.089	.543	.273
Q2_11	I intend to volunteer in the future.	.524	-.029	.303	.736	.128
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati.	.034	.639	-.001	.012	.800
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	-.020	.787	-.007	.013	.803
Q2_13	I will personally walk, run or bicycle for a charitable cause.	-.022	-.007	.579	.592	-.032
Q2_14	I plan to help raise money for a charitable cause.	.045	.033	.775	.848	-.117
Q2_15	I intend to donate money to charity in the future.	.091	.005	.643	.743	-.019
Q2_12	I plan to seek a career in a nonprofit organization.	.313	.169	.048	.583	-.117

Note: Factors are represented by blocks of items in the above table.

Appendix B

Factors and Items Emerging from EFA of Pretest Survey Data Comparing Overall with College Samples

Factor Content		Pretest Overall			Arts & Sciences			Health & Human Services		
#Item	Item	1	2	3	1	2	3	1	2	3
Q2_03	I am interested in this course.	.745	-.020	-.126	0.711	.016	-.075	.633	.069	.050
Q2_04	I am interested in student philanthropy or service learning.	.797	-.008	-.069	0.721	.030	.027	.580	.035	.124
Q2_05	I want to stay in college or complete my degree.	.420	-.065	.017	0.435	-.024	-.062	.610	-.131	-.029
Q2_06	I am interested in belonging to and participating actively in a group or association.	.552	.002	.141	0.582	-.033	.158	.415	.025	.339
Q2_07	I plan to work with someone or some group to solve problems in my community.	.665	.095	.068	0.585	.098	.182	.624	.112	.097
Q2_08	I have a responsibility to help others in need.	.639	.065	.097	0.477	.090	.248	.789	-.023	.014
Q2_09	I have a personal responsibility to the community in which I live.	.580	.137	.088	0.451	.167	.239	.642	.113	.006
Q2_10	I believe that I can make a difference in the world.	.547	.039	.089	0.435	.089	.181	.707	.065	-.100
Q2_11	I intend to volunteer in the future.	.524	-.029	.303	0.35	-.021	.460	.585	-.049	.259
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati.	.034	.639	-.001	0.021	.728	-.067	.024	.623	.025
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	-.020	.787	-.007	-0.041	.743	.017	-.013	.856	-.008
Q2_13	I will personally walk, run or bicycle for a charitable cause.	-.022	-.007	.579	-0.022	.002	.549	-.054	-.030	.676
Q2_14	I plan to help raise money for a charitable cause.	.045	.033	.775	0.04	.001	.758	.071	.060	.716
Q2_15	I intend to donate money to charity in the future.	.091	.005	.643	0.018	.025	.667	.071	.021	.679
Q2_12	I plan to seek a career in a nonprofit organization.	.313	.169	.048	0.207	.131	.211	.360	.265	.004

Factors and Items Emerging from EFA of Pretest Survey Data Comparing Overall with College Samples (continued)

Factor Content		Pretest Overall			Informatics				Other (Bus., Edu., Hon, SOTA)			
#Item	Item	1	2	3	1	2	3	4	1	2	3	4
Q2_03	I am interested in this course.	.745	-.020	-.126	.150	-.068	.830	.115	.705	.133	.041	.015
Q2_04	I am interested in student philanthropy or service learning.	.797	-.008	-.069	.275	.066	.544	-.011	.840	.035	-.040	-.181
Q2_05	I want to stay in college or complete my degree.	.420	-.065	.017	-.105	.017	.277	-.090	.500	-.081	.054	.504
Q2_06	I am interested in belonging to and participating actively in a group or association.	.552	.002	.141	.039	.205	.276	-.332	.472	-.166	.080	-.078
Q2_07	I plan to work with someone or some group to solve problems in my community.	.665	.095	.068	.345	.159	.185	-.263	.540	-.189	.088	-.215
Q2_08	I have a responsibility to help others in need.	.639	.065	.097	.697	.065	.048	-.094	.617	-.131	.142	.069
Q2_09	I have a personal responsibility to the community in which I live.	.580	.137	.088	.791	.023	-.079	-.086	.483	-.159	.180	-.052
Q2_10	I believe that I can make a difference in the world.	.547	.039	.089	.301	-.019	.079	-.328	.603	-.101	-.019	.102
Q2_11	I intend to volunteer in the future.	.524	-.029	.303	.378	.002	.199	-.411	.617	-.248	-.024	.037
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati.	.034	.639	-.001	-.077	.912	-.048	.040	.015	-.007	.721	.093
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	-.020	.787	-.007	.079	.573	.000	.014	-.013	.009	.591	-.092
Q2_13	I will personally walk, run or bicycle for a charitable cause.	-.022	-.007	.579	.018	-.097	-.021	-.492	-.018	-.576	.075	.112
Q2_14	I plan to help raise money for a charitable cause.	.045	.033	.775	.027	.061	.114	-.697	-.053	-.942	.058	-.101
Q2_15	I intend to donate money to charity in the future.	.091	.005	.643	.057	.112	-.044	-.687	.214	-.658	-.121	-.017
Q2_12	I plan to seek a career in a nonprofit organization.	.313	.169	.048	.410	.003	.040	.011	.178	-.001	.078	-.355

Appendix C

Factors and Items Emerging from EFA of Pretest Survey Data Comparing Overall with Focus of Study Samples (continued)

Factor Content		Pretest Overall			Language Studies			Assisting Professions		
#Item	Item	1	2	3	1	2	3	1	2	3
Q2_03	I am interested in this course.	.745	-.020	-.126	.636	.066	.087	.633	.069	.050
Q2_04	I am interested in student philanthropy or service learning.	.797	-.008	-.069	.585	.131	.192	.580	.035	.124
Q2_05	I want to stay in college or complete my degree.	.420	-.065	.017	.605	-.046	-.138	.610	-.131	-.029
Q2_06	I am interested in belonging to and participating actively in a group or association.	.552	.002	.141	.413	-.034	.385	.415	.025	.339
Q2_07	I plan to work with someone or some group to solve problems in my community.	.665	.095	.068	.546	.090	.280	.624	.112	.097
Q2_08	I have a responsibility to help others in need.	.639	.065	.097	.513	.049	.258	.789	-.023	.014
Q2_09	I have a personal responsibility to the community in which I live.	.580	.137	.088	.524	.132	.217	.642	.113	.006
Q2_10	I believe that I can make a difference in the world.	.547	.039	.089	.635	.115	.031	.707	.065	-.100
Q2_11	I intend to volunteer in the future.	.524	-.029	.303	.476	-.054	.359	.585	-.049	.259
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati.	.034	.639	-.001	.063	.684	-.072	.024	.623	.025
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	-.020	.787	-.007	-.042	.742	.036	-.013	.856	-.008
Q2_13	I will personally walk, run or bicycle for a charitable cause.	-.022	-.007	.579	.001	.016	.573	-.054	-.030	.676
Q2_14	I plan to help raise money for a charitable cause.	.045	.033	.775	.058	-.025	.791	.071	.060	.716
Q2_15	I intend to donate money to charity in the future.	.091	.005	.643	.032	-.028	.707	.071	.021	.679
Q2_12	I plan to seek a career in a nonprofit organization.	.313	.169	.048	.016	.130	.385	.360	.265	.004

Factors and Items Emerging from EFA of Pretest Survey Data Comparing Overall with Focus of Study Samples (continued)

Factor Content		Pretest Overall			Society and Human Studies				Business			
#Item	Item	1	2	3	1	2	3	4	1	2	3	4
Q2_03	I am interested in this course.	.745	-.020	-.126	.169	.730	-.168	.021	.521	.058	.041	-.065
Q2_04	I am interested in student philanthropy or service learning.	.797	-.008	-.069	.358	.393	-.106	.151	.627	.140	-.035	-.054
Q2_05	I want to stay in college or complete my degree.	.420	-.065	.017	-.191	.495	.177	.020	.234	.018	-.267	.037
Q2_06	I am interested in belonging to and participating actively in a group or association.	.552	.002	.141	.215	.384	.154	.122	.602	-.010	.004	.011
Q2_07	I plan to work with someone or some group to solve problems in my community.	.665	.095	.068	.615	.240	.155	-.031	.702	-.033	.168	-.015
Q2_08	I have a responsibility to help others in need.	.639	.065	.097	.752	.079	.072	-.105	.587	.141	-.040	.123
Q2_09	I have a personal responsibility to the community in which I live.	.580	.137	.088	.773	-.120	.152	.028	.428	.165	-.106	.279
Q2_10	I believe that I can make a difference in the world.	.547	.039	.089	.158	.128	.174	.325	.506	.000	-.006	.176
Q2_11	I intend to volunteer in the future.	.524	-.029	.303	.494	.203	.084	.243	.618	-.049	-.047	.210
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati.	.034	.639	-.001	.089	.047	.648	-.113	-.025	.851	-.063	-.050
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	-.020	.787	-.007	.034	-.082	.582	.120	.075	.499	.093	.095
Q2_13	I will personally walk, run or bicycle for a charitable cause.	-.022	-.007	.579	-.058	-.016	-.026	.683	-.048	.031	.007	.468
Q2_14	I plan to help raise money for a charitable cause.	.045	.033	.775	.157	.274	.157	.403	-.016	.064	.087	.897
Q2_15	I intend to donate money to charity in the future.	.091	.005	.643	.260	.187	.268	.067	.232	-.088	-.062	.597
Q2_12	I plan to seek a career in a nonprofit organization.	.313	.169	.048	.434	-.125	-.028	.202	.253	.026	.716	.094

Factors and Items Emerging from EFA of Pretest Survey Data Comparing Overall with Focus of Study Samples (continued)

Factor Content		Pretest Overall			Public Service			Other Studies		
#Item	Item	1	2	3	1	2	3	1	2	3
Q2_03	I am interested in this course.	.745	-.020	-.126	-.125	-.071	-.849	.724	.011	-.139
Q2_04	I am interested in student philanthropy or service learning.	.797	-.008	-.069	.105	-.015	-.748	.914	-.063	-.144
Q2_05	I want to stay in college or complete my degree.	.420	-.065	.017	.073	.004	-.255	.389	-.067	.168
Q2_06	I am interested in belonging to and participating actively in a group or association.	.552	.002	.141	.104	.040	-.611	.559	.058	.102
Q2_07	I plan to work with someone or some group to solve problems in my community.	.665	.095	.068	.264	.231	-.442	.611	.084	.152
Q2_08	I have a responsibility to help others in need.	.639	.065	.097	.324	.170	-.368	.618	.052	.177
Q2_09	I have a personal responsibility to the community in which I live.	.580	.137	.088	.356	.280	-.300	.580	.071	.112
Q2_10	I believe that I can make a difference in the world.	.547	.039	.089	.517	-.014	-.152	.579	-.034	.117
Q2_11	I intend to volunteer in the future.	.524	-.029	.303	.756	.019	-.021	.593	-.034	.273
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati.	.034	.639	-.001	-.017	.749	.066	.036	.622	.074
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	-.020	.787	-.007	-.043	.776	-.040	-.006	.789	-.048
Q2_13	I will personally walk, run or bicycle for a charitable cause.	-.022	-.007	.579	.561	.000	.037	-.007	.025	.604
Q2_14	I plan to help raise money for a charitable cause.	.045	.033	.775	.668	-.024	-.056	.062	.071	.832
Q2_15	I intend to donate money to charity in the future.	.091	.005	.643	.749	-.022	.048	.166	-.009	.644
Q2_12	I plan to seek a career in a nonprofit organization.	.313	.169	.048	.064	.226	-.437	.286	.093	-.017

Appendix D

Factors and Items Emerging from EFA of Posttest Survey Data Comparing Overall with College Samples

Factor Content		Posttest Overall		Arts & Sciences		Informatics		Other		
#Item	Item	1	2	1	2	1	2	1	2	3
Q2_04	I am interested in student philanthropy or service learning	.596	.238	.536	.300	.678	.167	.653	-.025	.356
Q2_06	I am interested in belonging to and participating actively in a group or association	.628	.120	.581	.163	.552	.254	.328	.258	.298
Q2_07	I plan to work with someone or some group to solve problems in my community	.768	.035	.737	.072	.829	-.054	.360	.181	.531
Q2_08	I have a responsibility to help others in need	.705	.156	.690	.173	.922	-.163	.665	.157	.051
Q2_09	I have a personal responsibility to the community in which I live	.703	.141	.652	.211	.928	-.173	.620	.183	.056
Q2_10	I believe that I can make a difference in the world	.543	.273	.436	.361	.703	.044	.597	.125	.064
Q2_11	I intend to volunteer in the future	.736	.128	.666	.200	.848	-.011	.520	.273	.136
Q2_12	I plan to seek a career in a nonprofit organization	.583	-.117	.619	-.159	.513	-.039	.001	.058	.454
Q2_13	I will personally walk, run or bicycle for a charitable cause	.592	-.032	.583	-.032	.537	.132	-.045	.643	-.021
Q2_14	I plan to help raise money for a charitable cause	.848	-.117	.807	-.093	.739	.096	.018	.786	.175
Q2_15	I intend to donate money to charity in the future	.743	-.019	.691	.033	.735	.030	.177	.622	-.002
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati	.012	.800	-.040	.830	.062	.624	.737	-.080	-.028
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati	.013	.803	-.010	.796	.011	.830	.720	-.026	-.088
Q2_05	I want to stay in college or complete my degree	.265	.453	.142	.523	.340	.234	.587	.221	-.295
Q2_03	I am interested in this course	.374	.382	.267	.454	.548	.301	.715	-.091	.167

Note: Health & Human Services extracted only 1 factor, no loadings were provided.

Appendix E

Factors and Items Emerging from EFA of Posttest Survey Data Comparing Overall with College Samples (continued)

Factor Content		Overall		Language		Society & Human Studies		Business	
						1	2	1	2
#Item	Item	1	2	1	2	1	2	1	2
Q2_04	I am interested in student philanthropy or service learning	.596	.238	.604	.212	.771	.070	.539	.251
Q2_06	I am interested in belonging to and participating actively in a group or association	.628	.120	.703	.024	.588	.195	.594	.176
Q2_07	I plan to work with someone or some group to solve problems in my community	.768	.035	.838	-.062	.830	-.022	.762	.071
Q2_08	I have a responsibility to help others in need	.705	.156	.747	.105	.839	-.023	.665	.184
Q2_09	I have a personal responsibility to the community in which I live	.703	.141	.663	.139	.946	-.112	.673	.212
Q2_10	I believe that I can make a difference in the world	.543	.273	.356	.406	.661	.128	.681	.142
Q2_11	I intend to volunteer in the future	.736	.128	.661	.208	.845	.020	.700	.187
Q2_12	I plan to seek a career in a nonprofit organization	.583	-.117	.647	-.180	.556	-.071	.461	-.124
Q2_13	I will personally walk, run or bicycle for a charitable cause	.592	-.032	.586	.039	.510	.053	.584	-.008
Q2_14	I plan to help raise money for a charitable cause	.848	-.117	.786	-.067	.799	-.016	.830	-.093
Q2_15	I intend to donate money to charity in the future	.743	-.019	.658	.094	.757	.030	.687	.027
Q2_01	I am aware of the needs and problems of people living in Northern Kentucky and Greater Cincinnati	.012	.800	-.012	.842	.083	.623	.069	.768
Q2_02	I am aware of nonprofit organizations in Northern Kentucky and Greater Cincinnati	.013	.803	.022	.823	-.060	.902	.010	.759
Q2_05	I want to stay in college or complete my degree	.265	.453	.100	.527	.264	.473	.281	.351
Q2_03	I am interested in this course	.374	.382	.475	.255	.497	.296	.264	.449

Note: Assisting Professions extracted only 1 factor, no loadings were provided.

Appendix F

Factors and Items Emerging from EFA of The Mayerson Class Experience Posttest Survey Data Comparing Overall with College Samples

Factor Content		Overall		Arts & Sciences		Health & Human		
						Services		
#	Item	1	2	1	2	1	2	3
Q3_01	Your awareness of the needs and problems addressed in this class.	.747	-.097	.016	.770	.632	.063	-.121
Q3_02	Your awareness of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	.742	-.061	.012	.727	.649	.043	-.124
Q3_03	Your intention to donate money to a charitable organization.	.729	.153	.033	.773	.957	-.136	.054
Q3_04	Your interest in taking another course with student philanthropy or service learning.	.722	.136	.325	.423	.774	.053	.104
Q3_05	Your intention to volunteer.	.687	.188	-.068	.894	.904	-.062	.022
Q3_06	Your plans to work with someone or some group to solve problems in your community.	.661	.092	-.037	.876	.977	-.091	.081
Q3_07	Your plans to personally walk, run or bicycle for a charitable cause.	.606	.049	-.008	.839	.792	.004	-.023
Q3_08	The development of your functional life skills, like communications, assertiveness and decision making.	.605	.258	.073	.747	.679	.121	-.046
Q3_09	Your desire to stay in college and complete a degree.	.573	.236	.174	.503	.334	.113	-.475
Q3_10	Your academic skills or knowledge.	.520	.285	.619	.250	.419	.174	-.482
Q3_15	Your plans to help raise money for a charitable cause.	.888	-.062	.522	.282	.434	.215	-.303
Q3_16	Your application of information and ideas from this course.	.812	.020	.640	-.016	.466	.297	.062
Q3_17	Your belief that you can make a difference in the world.	.809	.066	.756	.097	.454	.427	-.060
Q3_18	Your interest in community service.	.799	-.128	.853	.034	.477	.392	-.063
Q3_19	The actual amount of time that you currently volunteer.	.794	-.001	.823	.013	.142	.603	-.224
Q3_11	Your sense of purpose or direction in life.	-.074	.905	.664	.228	.365	.367	-.290
Q3_12	Your belief that you have a responsibility to help others in need.	-.057	.901	.744	.134	.412	.379	-.219

Q3_13	Your learning of the material in this course.	.013	.822	.732	-.020	.581	.141	-.199
Q3_14	Your interest in this course.	.004	.818	.553	.264	.372	.286	-.292
Q3_20	Your sense of personal responsibility to the community in which you live.	.044	.740	.806	-.008	-.020	.746	-.186
Q3_21	Your interest in belonging to and participating actively in a group or association.	.135	.690	.758	-.063	-.084	.682	-.096
Q3_22	The actual amount of funds that you currently donate to charitable organizations.	.098	.639	.882	-.047	-.013	.838	-.086
Q3_23	Your intention to work on behalf of social justice.	.298	.481	.747	-.096	.143	.758	.326
Q3_24	Your consideration of a career in the nonprofit sector.	.260	.422	.757	-.049	.208	.663	.363

Factors and Items Emerging from EFA of The Mayerson Class Experience Posttest Survey Data Comparing Overall with College Samples
(continued)

Factor Content		Overall		Informatics		Other (Bus., Edu., Hon., and SOTA)		
#	Item	1	2	1	2	1	2	3
Q3_01	Your awareness of the needs and problems addressed in this class.	.747	-.097	.021	-.782	.101	-.674	.021
Q3_02	Your awareness of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	.742	-.061	.186	-.528	.069	-.506	.216
Q3_03	Your intention to donate money to a charitable organization.	.729	.153	.065	-.839	.045	-.758	.040
Q3_04	Your interest in taking another course with student philanthropy or service learning.	.722	.136	.367	-.488	.058	-.549	.253
Q3_05	Your intention to volunteer.	.687	.188	-.113	-.956	.011	-.821	-.020
Q3_06	Your plans to work with someone or some group to solve problems in your community.	.661	.092	-.028	-.877	-.123	-.921	.040
Q3_07	Your plans to personally walk, run or bicycle for a charitable cause.	.606	.049	.131	-.750	.148	-.749	-.089
Q3_08	The development of your functional life skills, like communications, assertiveness and decision making.	.605	.258	.126	-.755	.389	-.455	-.048
Q3_09	Your desire to stay in college and complete a degree.	.573	.236	.254	-.490	.720	-.092	-.229
Q3_10	Your academic skills or knowledge.	.520	.285	.595	-.329	.795	-.114	-.063
Q3_15	Your plans to help raise money for a charitable cause.	.888	-.062	.542	-.284	.517	-.224	.075
Q3_16	Your application of information and ideas from this course.	.812	.020	.622	-.127	.077	-.026	.556
Q3_17	Your belief that you can make a difference in the world.	.809	.066	.649	-.232	.414	-.163	.346
Q3_18	Your interest in community service.	.799	-.128	.792	-.105	.435	-.136	.372
Q3_19	The actual amount of time that you currently volunteer.	.794	-.001	.762	-.083	.674	-.121	.120
Q3_11	Your sense of purpose or direction in life.	-.074	.905	.700	-.199	.783	-.028	.060
Q3_12	Your belief that you have a responsibility to help others in need.	-.057	.901	.779	-.121	.536	-.244	.173
Q3_13	Your learning of the material in this course.	.013	.822	.620	-.150	.279	-.223	.367

MAYERSON PROJECTS

35

Q3_14	Your interest in this course.	.004	.818	.629	-.222	.524	-.184	.097
Q3_20	Your sense of personal responsibility to the community in which you live.	.044	.740	.657	-.192	.660	-.027	.167
Q3_21	Your interest in belonging to and participating actively in a group or association.	.135	.690	.807	.111	.701	.185	.193
Q3_22	The actual amount of funds that you currently donate to charitable organizations.	.098	.639	.782	-.086	.732	.042	.170
Q3_23	Your intention to work on behalf of social justice.	.298	.481	.792	.147	.114	-.045	.635
Q3_24	Your consideration of a career in the nonprofit sector.	.260	.422	.830	.182	.022	-.175	.703

Appendix G

Factors and Items Emerging from EFA of The Mayerson Class Experience Posttest Survey Data Comparing Overall with Focus of Study Samples

Factor Content		Overall		Language Studies		Assisting Professions			Society & Human Studies	
#	Item	1	2	1	2	1	2	3	1	2
Q3_01	Your awareness of the needs and problems addressed in this class.	.747	-.097	.006	.777	.632	.063	-.121	.230	.564
Q3_02	Your awareness of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	.742	-.061	.059	.731	.649	.043	-.124	.270	.497
Q3_03	Your intention to donate money to a charitable organization.	.729	.153	.131	.687	.957	-.136	.054	.272	.614
Q3_04	Your interest in taking another course with student philanthropy or service learning.	.722	.136	.377	.455	.774	.053	.104	.435	.398
Q3_05	Your intention to volunteer.	.687	.188	.008	.816	.904	-.062	.022	-.131	.962
Q3_06	Your plans to work with someone or some group to solve problems in your community.	.661	.092	.081	.784	.977	-.091	.081	.013	.834
Q3_07	Your plans to personally walk, run or bicycle for a charitable cause.	.606	.049	-.121	.945	.792	.004	-.023	-.024	.916
Q3_08	The development of your functional life skills, like communications, assertiveness and decision making.	.605	.258	-.037	.871	.679	.121	-.046	-.020	.859
Q3_09	Your desire to stay in college and complete a degree.	.573	.236	.067	.598	.334	.113	-.475	.065	.697
Q3_10	Your academic skills or knowledge.	.520	.285	.611	.275	.419	.174	-.482	.561	.374
Q3_15	Your plans to help raise money for a charitable cause.	.888	-.062	.488	.324	.434	.215	-.303	.406	.427
Q3_16	Your application of information and ideas from this course.	.812	.020	.558	.044	.466	.297	.062	.757	-.022
Q3_17	Your belief that you can make a difference in the world.	.809	.066	.750	.131	.454	.427	-.060	.746	.116
Q3_18	Your interest in community service.	.799	-.128	.813	.097	.477	.392	-.063	.816	.065

Q3_19	The actual amount of time that you currently volunteer.	.794	-.001	.821	.044	.142	.603	-.224	.795	.044
Q3_11	Your sense of purpose or direction in life.	-.074	.905	.622	.288	.365	.367	-.290	.799	.102
Q3_12	Your belief that you have a responsibility to help others in need.	-.057	.901	.768	.130	.412	.379	-.219	.865	.023
Q3_13	Your learning of the material in this course.	.013	.822	.688	.006	.581	.141	-.199	.795	-.033
Q3_14	Your interest in this course.	.004	.818	.404	.411	.372	.286	-.292	.570	.287
Q3_20	Your sense of personal responsibility to the community in which you live.	.044	.740	.796	-.017	-.020	.746	-.186	.680	.154
Q3_21	Your interest in belonging to and participating actively in a group or association.	.135	.690	.746	-.049	-.084	.682	-.096	.853	-.105
Q3_22	The actual amount of funds that you currently donate to charitable organizations.	.098	.639	.868	-.001	-.013	.838	-.086	.846	.033
Q3_23	Your intention to work on behalf of social justice.	.298	.481	.743	-.144	.143	.758	.326	.698	-.036
Q3_24	Your consideration of a career in the nonprofit sector.	.260	.422	.796	-.067	.208	.663	.363	.754	-.097

Factors and Items Emerging from EFA of The Mayerson Class Experience Posttest Survey Data Comparing Overall with Focus of Study Samples (continued)

Factor Content		Business Related									
		Overall		Studies		Public Services			Other Studies		
#	Item	1	2	1	2	1	2	3	1	2	3
Q3_01	Your awareness of the needs and problems addressed in this class.	.747	-.097	.116	.739	-.021	.776	.063	.062	.691	.025
Q3_02	Your awareness of nonprofit organizations in Northern Kentucky and Greater Cincinnati.	.742	-.061	.220	.453	-.002	.735	.043	.102	.536	.105
Q3_03	Your intention to donate money to a charitable organization.	.729	.153	-.030	.868	.211	.747	-.122	.068	.748	-.001
Q3_04	Your interest in taking another course with student philanthropy or service learning.	.722	.136	.368	.402	.110	.444	.117	.187	.494	.148
Q3_05	Your intention to volunteer.	.687	.188	-.083	.953	-.065	.899	.039	-.064	.857	.037
Q3_06	Your plans to work with someone or some group to solve problems in your community.	.661	.092	.014	.881	-.143	.947	.032	-.119	.902	.044
Q3_07	Your plans to personally walk, run or bicycle for a charitable cause.	.606	.049	.239	.647	.271	.650	-.101	.114	.713	-.022
Q3_08	The development of your functional life skills, like communications, assertiveness and decision making.	.605	.258	.392	.475	.106	.716	.019	.346	.465	-.010
Q3_09	Your desire to stay in college and complete a degree.	.573	.236	.350	.377	.654	.145	-.169	.550	.196	-.157
Q3_10	Your academic skills or knowledge.	.520	.285	.628	.284	.863	.043	-.039	.862	.035	-.143
Q3_15	Your plans to help raise money for a charitable cause.	.888	-.062	.558	.268	.532	.135	.182	.546	.231	.030
Q3_16	Your application of information and ideas from this course.	.812	.020	.725	-.170	.313	.158	.273	.247	.106	.397
Q3_17	Your belief that you can make a difference in the world.	.809	.066	.725	.177	.536	.167	.216	.524	.110	.230

Q3_18	Your interest in community service.	.799	-.128	.804	.099	.517	.051	.395	.705	-.012	.211
Q3_19	The actual amount of time that you currently volunteer.	.794	-.001	.726	.180	.525	-.048	.408	.853	-.041	.003
Q3_11	Your sense of purpose or direction in life.	-.074	.905	.689	.206	.911	.015	-.030	.823	.062	-.069
Q3_12	Your belief that you have a responsibility to help others in need.	-.057	.901	.702	.176	.842	.016	.043	.732	.175	-.015
Q3_13	Your learning of the material in this course.	.013	.822	.800	-.077	.598	.075	.134	.417	.187	.227
Q3_14	Your interest in this course.	.004	.818	.667	.181	.644	.028	.198	.616	.105	.046
Q3_20	Your sense of personal responsibility to the community in which you live.	.044	.740	.707	.127	.544	.026	.390	.693	-.019	.158
Q3_21	Your interest in belonging to and participating actively in a group or association.	.135	.690	.767	-.049	.214	.037	.519	.685	-.145	.151
Q3_22	The actual amount of funds that you currently donate to charitable organizations.	.098	.639	.845	.012	.324	.032	.588	.716	-.048	.153
Q3_23	Your intention to work on behalf of social justice.	.298	.481	.808	-.066	-.031	.136	.762	.067	.079	.722
Q3_24	Your consideration of a career in the nonprofit sector.	.260	.422	.782	-.023	.003	.157	.684	.045	.156	.741

Appendix H

**Proposed Survey – Pre-project
Evaluation of Student Philanthropy at NKU
Start-of-semester Student Survey**

Student participants

Consent Form

I hereby consent to participate in an evaluation of student philanthropy programs at Northern Kentucky University (NKU). The primary purpose of this study is to assess student philanthropy from the perspective of various participants, including students, faculty and nonprofit organization representatives. The results will be used to evaluate the program and improve it for participants in future semesters. More generally, they will be used to increase our understanding of student philanthropy as a teaching method, particularly its impact on the various participants.

Your part in the study will be to answer questions about your attitudes, beliefs, values and intentions. This survey will take approximately 10 minutes to complete. Participation in this study is strictly voluntary; that is, you do not have to participate if you do not want to. You may decline to participate in the study at any time without a negative consequence.

Your responses to these questions will be kept confidential. Your responses will be cumulated with the responses from hundreds of other NKU students involved in student philanthropy programs this semester. Any results or reports related to the study will not link the names of respondents to their responses or comments.

There are no significant risks associated with participation in this study, and there are no tangible benefits. A potential intangible benefit is the “good feeling” that you may get from contributing to a study designed to improve student philanthropy programs at NKU and, more broadly, to contribute to the understanding of student philanthropy as a teaching method in the broader academic community.

Your name:

Your signature:

Name of this course (e.g., Volunteer Management):

Discipline abbreviation and course number (e.g., PAD 622):

Any questions about to this study may be directed to Danielle McDonald, Ph.D, Director of the Mayerson Student Philanthropy Project, Northern Kentucky University, at either mcdonald1@nku.edu or 859-572-5592.

Questions about your rights as a participant in this research may be directed to Philip J. Moberg, Ph.D., IRB Chair, Northern Kentucky University, at either mobergp1@nku.edu or 859-572-1913.

On a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree,” please CIRCLE THE ONE NUMBER that best represents your response to each of the following statements.

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I talk to others about what I am learning in class.	1	2	3	4	5
I may or may not change my major, but I will complete my degree at NKU.	1	2	3	4	5
I have a specific community issue/issues I want to get involved in solving.	1	2	3	4	5
I want to become more active in helping my community.	1	2	3	4	5
Giving back to my community is meaningful and purposeful.	1	2	3	4	5
I do not plan to become more involved in my community.	1	2	3	4	5
I do not look for ways to contribute to my community.	1	2	3	4	5
I do not intend to complete my studies at NKU.	1	2	3	4	5
I think I should be more involved in enriching my community.	1	2	3	4	5
I actively contribute to class discussions.	1	2	3	4	5
I do not want to participate in more events in my community.	1	2	3	4	5
I plan to learn about the needs in my community.	1	2	3	4	5
I feel a sense of responsibility to give back to my community.	1	2	3	4	5
I plan on participating in activities that promote the well-being of my community.	1	2	3	4	5
I intend to look for ways to give back to my community.	1	2	3	4	5
I am not very interested in my coursework.	1	2	3	4	5
I want to act in ways that bring a positive change in my community.	1	2	3	4	5
I often ‘zone out’ in class.	1	2	3	4	5
When something does not make sense, I keep trying until I figure it out.	1	2	3	4	5

I will look for volunteer opportunities that are available in my community.	1	2	3	4	5
I believe it is important to learn about the needs in my community.	1	2	3	4	5
I do not believe that I can make an impact on my community.	1	2	3	4	5
I want to participate in activities that promote the well-being of members in my community.	1	2	3	4	5
I have thought about transferring to another college/university to finish my degree.	1	2	3	4	5
I often participate in classroom discussions.	1	2	3	4	5
I feel responsible for the well-being of my community and its members.	1	2	3	4	5
I do not plan to return to Northern Kentucky University next semester.	1	2	3	4	5
I do not want to make a difference in my community.	1	2	3	4	5
I believe I have a responsibility to help others in my community.	1	2	3	4	5
I feel optimistic about completing my degree at NKU.	1	2	3	4	5
I do not plan to stay informed about needs in my community.	1	2	3	4	5
I rarely ask or answer questions in class.	1	2	3	4	5
I plan to return to NKU next semester.	1	2	3	4	5
It is important for me to interact with my professor and classmates.	1	2	3	4	5
It is important to learn about opportunities to give back to my community.	1	2	3	4	5
I complete assigned readings and coursework before class.	1	2	3	4	5
I do not believe I have a responsibility to help my community.	1	2	3	4	5

Questions revolved around pursuing opportunities to give back to the community.

PLEASE TURN OVER AND
COMPLETE THE OTHER SIDE

>>>>>>

Your gender [circle one number]

- 1 Male
- 2 Female
- 3 Other

Your age [circle one number]

- 1 Less than 18 years old
- 2 18 to 25 years old
- 3 26 to 35 years old
- 4 36 to 45 years old
- 5 More than 45 years old

Your race or ethnicity [circle numbers that are relevant]

- 1 White
- 2 Black or African American
- 3 Hispanic or Latino
- 4 Asian
- 5 American Indian/Alaska Native
- 6 Native Hawaiian or Other Pacific Islander
- 7 Other race

Your year in school [circle one number]

- 1 Freshman
- 2 Sophomore
- 3 Junior
- 4 Senior
- 5 Graduate student
- 6 Other

Appendix I

Proposed Survey – Post Project
Evaluation of the Mayerson Student Philanthropy Project
End-of-semester Student Evaluation & Reflection

Please answer the following questions as honestly as you can. There are no “right” or “wrong” answers. Your responses will remain confidential. The results of this study data will be presented only in aggregate form and will not be associated with the names of any individual students.

1. Your name:

2. Name of this course (e.g., Volunteer Management):

3. Discipline abbreviation and course number (e.g., PAD 622):

4. Your signature:

On a scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree,” please **CIRCLE THE ONE NUMBER** that best represents your response to each of the following statements about your attitudes, beliefs, values and intentions:

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I talk to others about what I am learning in class.	1	2	3	4	5
I may or may not change my major, but I will complete my degree at NKU.	1	2	3	4	5
I have a specific community issue/issues I want to get involved in solving.	1	2	3	4	5
I want to become more active in helping my community.	1	2	3	4	5
Giving back to my community is meaningful and purposeful.	1	2	3	4	5
I do not plan to become more involved in my community.	1	2	3	4	5
I do not look for ways to contribute to my community.	1	2	3	4	5
I do not intend to complete my studies at NKU.	1	2	3	4	5
I think I should be more involved in enriching my community.	1	2	3	4	5

I actively contribute to class discussions.	1	2	3	4	5
I do not want to participate in more events in my community.	1	2	3	4	5
I plan to learn about the needs in my community.	1	2	3	4	5
I feel a sense of responsibility to give back to my community.	1	2	3	4	5
I plan on participating in activities that promote the well-being of my community.	1	2	3	4	5
I intend to look for ways to give back to my community.	1	2	3	4	5
I am not very interested in my coursework.	1	2	3	4	5
I want to act in ways that bring a positive change in my community.	1	2	3	4	5
I often 'zone out' in class.	1	2	3	4	5
When something does not make sense, I keep trying until I figure it out.	1	2	3	4	5
I will look for volunteer opportunities that are available in my community.	1	2	3	4	5
I believe it is important to learn about the needs in my community.	1	2	3	4	5
I do not believe that I can make an impact on my community.	1	2	3	4	5
I want to participate in activities that promote the well-being of members in my community.	1	2	3	4	5
I have thought about transferring to another college/university to finish my degree.	1	2	3	4	5
I often participate in classroom discussions.	1	2	3	4	5
I feel responsible for the well-being of my community and its members.	1	2	3	4	5
I do not plan to return to Northern Kentucky University next semester.	1	2	3	4	5
I do not want to make a difference in my community.	1	2	3	4	5
I believe I have a responsibility to help others in my community.	1	2	3	4	5
I feel optimistic about completing my degree at NKU.	1	2	3	4	5
I do not plan to stay informed about needs in my community.	1	2	3	4	5
I rarely ask or answer questions in class.	1	2	3	4	5
I plan to return to NKU next semester.	1	2	3	4	5
It is important for me to interact with my professor and classmates.	1	2	3	4	5

It is important to learn about opportunities to give back to my community.	1	2	3	4	5
I complete assigned readings and coursework before class.	1	2	3	4	5
I do not believe I have a responsibility to help my community.	1	2	3	4	5
After taking this course, I have a better understanding of my community's needs	1	2	3	4	5
I know how I can learn about my community's needs.	1	2	3	4	5
I am now more aware of the non-profit organizations in my community	1	2	3	4	5
The Mayerson philanthropy project motivated me to be more active with my classmates.	1	2	3	4	5
My enthusiasm for this class has been enhanced by the Mayerson philanthropy project.	1	2	3	4	5
Because of the Mayerson philanthropy component, I understood this class better.	1	2	3	4	5
The Mayerson project fit well with the goals and outcomes of this course.	1	2	3	4	5
In general, how satisfied or dissatisfied are you with the Mayerson philanthropy experience in this course?	1	2	3	4	5

What led you to be satisfied or dissatisfied with the Mayerson experience?

What is your most valuable take away(s) from this experience?

As a result the of course, do you plan to make any changes related to your involvement in your community?

Briefly summarize your Mayerson project. How did this project relate to your course material?

Are there any additional thoughts regarding your Mayerson experience that you would like to share?

Please discuss the most significant things you learned this semester about philanthropy. (Please use a few sentences to elaborate on your response.)

THANK YOU FOR COMPLETING THE SURVEY. WE REALLY APPRECIATE IT!

Appendix J

Question on Survey	Category	Item
1	Classroom Engagement	I talk to others about what I am learning in class.
2	Intention to Stay	I may or may not change my major, but I will complete my degree at NKU
3	Community Engagement	I have a specific community issue/issues I want to get involved in solving.
4	Stewardship	I want to become more active in helping my community
5	Stewardship	Giving back to my community is meaningful and purposeful.
6	Community Engagement	I do not plan to become more involved in my community (reverse code)
7	Community Engagement	I do not look for ways to contribute to my community. (reverse code)
8	Intention to Stay	I do not intend to complete my studies at NKU. (reverse code)
9	Community Engagement	I think I should be more involved in enriching my community.
10	Classroom Engagement	I actively contribute to class discussions.
11	Stewardship	I do not want to participate in more events in my community. (reverse code)
12	Community Engagement	I plan to learn about the needs in my community.
13	Stewardship	I feel a sense of responsibility to give back to my community.
14	Stewardship	I plan on participating in activities that promote the well-being of my community.
15	Community Engagement	I intend to look for ways to give back to my community.
16	Classroom Engagement	I am not very interested in my coursework.(reverse code)
17	Community Engagement	I want to act in ways that bring a positive change in my community.
18	Classroom Engagement	I often 'zone out' in class. (reverse code)
19	Classroom Engagement	When something does not make sense, I keep trying until I figure it out.
20	Community Engagement	I will look for volunteer opportunities that are available in my community
21	Community Engagement	I believe it is important to learn about the needs in my community.
22	Stewardship	I do not believe that I can make an impact on my community. (reverse code)
23	Stewardship	I want to participate in activities that promote the well-being of members in my community.
24	Intention to Stay	I have thought about transferring to another college/university to finish my degree
25	Classroom Engagement	I often participate in class discussions.
26	Stewardship	I feel responsible for the well-being of my community and its members.
27	Intention to Stay	I do not plan to return to Northern Kentucky University next semester (reverse code)
28	Stewardship	I do not want to make a difference in my community. (reverse code)

29	Stewardship	I believe I have a responsibility to help others in my community.
30	Intention to Stay	I feel optimistic about completing my degree at NKU.
31	Community Engagement	I do not plan to stay informed about needs in my community (reverse code)
32	Classroom Engagement	I rarely ask or answer questions in class. (reverse code)
33	Intention to Stay	I plan to return to NKU next semester.
34	Classroom Engagement	It is important for me to interact with my professor and classmates.
35	Stewardship	It is important to learn about opportunities to give back to my community.
36	Classroom Engagement	I complete assigned readings and coursework before class.
37	Stewardship	I do not believe I have a responsibility to help my community ((reverse code)
38	Community Awareness	After taking this course, I have a better understanding of my community's needs
39	Community Awareness	I know how I can learn about my community's needs.
40	Community Awareness	I am now more aware of the non-profit organizations in my community
41	Mayerson Experience	The Mayerson philanthropy project motivated me to be more active with my classmates.
42	Mayerson Experience	My enthusiasm for this class has been enhanced by the Mayerson philanthropy project.
43	Mayerson Experience	Because of the Mayerson philanthropy component, I understood this class better.
44	Mayerson Experience	The Mayerson project fit well with the goals and outcomes of this course.
45	Mayerson Experience	In general, how satisfied or dissatisfied are you with the Mayerson philanthropy experience in this course?
46	Mayerson Experience Long Form	What led you to be satisfied or dissatisfied with the Mayerson experience (long form)
47	Long form	What is your most valuable take away(s) from this experience?
48	Long form	As a result of course, do you plan to make any changes related to your involvement in your community?
49	Long form	Breifly summarize your Mayerson project. How did this project relate to your course material?
50	Long form	Are there any additional thoughts regarding your Mayerson experience that you would like to share?
51	Long form	Please discuss the most significant things you learned this semester about philanthropy. (Please use a few sentences to elaborate on your response.)