

CONFIRMATORY ANALYSIS OF SERVANT LEADERSHIP DIMENSION TO THE INDONESIAN ACADEMIC LEADER

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Abstract: Understanding Leadership in tertiary education is interesting. Greenleaf, the father of Servant Leadership, has been inspired by several Servant Leadership issues in college before he published his seminal paper on servant leadership. After surveying 11 models and scales of Servant leadership we finally apply the 35-item, six-dimension measure of Servant Leadership Behavior Scale (SLBS). This multi-dimensional measurement was developed by Sendjaya. This study investigates and validates the 6 dimensions and 35 attributes of Servant Leadership. A 35-question questionnaire is used to measure the quality of department heads as the academic leaders in higher education. We study the Servant Leadership Dimension of Head of Department with 120 faculty members. Confirmatory factor analysis is performed to verify and validate the dimension of Servant leadership. It is found that the scale can be used in the context of higher education with one or two significant attributes in every dimension.

Keywords: confirmatory factor analysis, servant leadership, higher education, leadership behavior scale, academic leader

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In this era of disruption, emerging technology such as 3-D printing, Artificial Intelligence, and the Internet of Things has changed a lot of business models. The use of cloud service, crowdfunding, open-source, and freemium also affect the operation model of education, especially higher education. Higher education is expected to achieve wide objectives

that include teaching, research, and other social responsibilities.

The University faces external and internal challenges. External challenges may come from the market, other learning institutions, accreditation bodies, government, and society. On the other hand, higher education also faces internal issues such as sustainability, innovation, and leadership. As players in global education, these academic leaders should have more than transformational and authentic leadership since they have to manage how to engage with the faculty, professionals, and the students as well.

This situation demands a holistic approach to the leadership of Higher Education. Several studies have been done to explore leadership in Higher Education. The leadership style shall understand the contextual and systemic nature of academic leadership practice. Boer and Goedegebuure (2009), investigated the changing nature of the dean leadership in Higher education where the finding of the new nature of the deanship the research remains scant and in need of further study. Bryman and Lilley (2009), explores in higher education perceptions of effective leadership, with a particular focus on the important but less investigated role that is Head of the department. Wheeler (2012), has proposed a Servant leadership approach in the academic environment. He wrote: "If your goal is to create or enhance a culture that promotes service, individual and collective responsibility, positive and effective relationships, and strong ethics, servant leadership may be the means to your goals". Sendjaya (2005), Sendjaya (2015), and Sendjaya et al. (2008), The working definition of servant leadership have been developed as a holistic approach to leadership that engages both followers and leaders through Spiritual Motivation, Moral Courage, Relational Emphasis, Authenticity Focus, Service Orientation, and Effect change both leaders and followers to become what they can realize. The finding becomes the scale measurement to the Servant Leadership behavior.

We study the Servant Leadership Dimension of the Head of Department (HoD) with 120 faculty members. The dimension scale used is 5 Servant Leadership Dimension by Sendjaya with 35 attributes. Confirmatory factor analysis was performed to the validity of the scale and verify the dimensionality. All the dimensions are valid and reliable and can be applied to academic leaders in Indonesia. The paper starts with a literature review on Servant Leadership, model and measurement scale of servant Leadership behavior, and Servant Leadership in higher education. A confirmatory Factor Analysis is used to see the validity and reliability of the dimension. Data analysis is given on the Convergent Validity, Cronbach Alpha coefficient, Average Variance Extracted, and Composite Reliability.

After the result discussion, we proposed issues for further research.

LITERATURE REVIEW

Leadership

Leadership can be defined as "a process by which a person influences others to accomplish an objective and directs the organization in a way that makes it more cohesive and coherent" (Sharma and Jain, 2013 and Northouse, 2007). The strong leadership possessed by the leader will be a good role model for his employees because leaders are usually able to achieve good achievements and this will result in the trust and admiration of their employees and inadvertently change their attitudes, belief, and values (Grint, 2007). Burns (1978), introducing transactional and transformational leadership behaviors, since then, the leadership field has received great attention. the research found transformational received the most positive follower reactions. The other type is servant leadership, which also received great attention and is considered as characteristic of the desired relationship by leaders and followers in the last decade. But serving leadership lacks empirical research studies (Bughenhagen, 2006). The idea of being a servant leader is very attractive among many leadership enthusiasts (Green et al., 2015), showed that interest in servant leadership has been growing. By 2000, there were almost 300 dissertations on the topic and just below 130 published articles. Around 265 books on the topic have been published.

Servant Leadership

Servant leadership is a different approach compared to other leadership types. Robert Greenleaf Developed it in 1970 based on several characteristics such as having the heart to serve others, ethical, trustworthy, strategic, and visionary. (Greenleaf, 2002; Fisher, 2004; Blanchard & Hodges, 2003; and Autry, 2001). Greenleaf (2002), stated "Servant leaders are functionally superior because they are closer to the ground – they hear things, know things and their intuitive insight is exceptional. Because of this,

they are dependable and trusted” (p. 56). Followers connect to servant leaders based on the personal examples of the leader and leadership traits to include integrity, high ethical values, and a servant heart aimed at both follower development and organizational goals. Controversy with servant leadership arises over the word “servant”. Many studies have been conducted within business entities to explore Servant Leadership practices, whose main focus is to meet the needs of followers including their emotional needs including pros and cons. (Sipe and Frick, 2015).

Servant Leadership Model and Measurement

Given Servant Leadership consider new as the branch of knowledge some researches had been done to model and measure the model the Servant Leadership. Spears (1996), based on Greenleaf’s idea proposed ten characteristics of Servant leadership. Characteristics are usually cited as essential elements of servant leadership. They are community building, healing, empathy, listening, awareness, persuasion, conceptualization, foresight, stewardship, and commitment. The development of adequate scale instruments requires a multi-dimensional concept because Servant leadership includes a wide range of behaviors that are not easily understood in one or two constructs. A conceptual model and assessment of the six groups of characteristics of servant leadership have been developed by Laub (2003): Shared Leadership, Providing Leadership, Displaying Authenticity, Building Community, Respecting People, and Personal Development. These consist of three categories. The model is called OLA, Organizational Leadership Assessment, and considered as the first systematic measurement of the attributes of Servant Leadership. The factor analysis of the model shows 2 underlying dimensions: organization culture and leadership.

Page and Wong (2000), defined another set of characteristics of Servant Leadership. It covers different dimensions and different characteristics compared to Spear’s. Page and Wong’s model covers ten characteristics namely Shared decision-making, Team Building, Modeling, Leading, Goal setting, Visioning, Caring for others, Servanthood, Humility,

and Integrity. Russel and Stone (2002), developed the primary attributes and functional attributes of Servant Leadership. There are nine main attributes namely Pioneering, Modeling, Service, Trust, Integrity, Honesty, Respect for others, Empowerment, and Vision. While the functional attributes consist of Delegation, Teaching, Encouragement, Listening, Persuasion, Influence, Visibility, Competence, Credibility, Stewardship, and Communication. Patterson (2003), continued the work of Russel and Stone and came up with a model that includes seven constructs of Servant Leadership: Agapao love (social or moral sense), Act with humility, Altruistic (helping selflessly), Vision for the follower, Trust, Empowerment, Service.

Ehrhart (2004), developed a Servant Leadership scale that consists of 14 items focused on prioritization of subordinates’ concerns and ethical behaviors. It is used as a one-dimensional general scale of servant Leadership. The one dimensional measures are easy to apply but lost the ability to distinguish different servant Leadership dimensions. Barbuto and Wheeler (2006), proposed a model called Servant Leadership Questionnaire (SLQ) The model applies a questionnaire that identifies and confirms five dimensions of servant Leadership such as Altruistic calling, Organizational Stewardship, Persuasive Mapping, Wisdom, and Emotional Healing. The five dimensions have 11 attributes. Liden et al. (2008), constructed a 28 characteristic of scale in Servant Leadership. The scales are categorized into seven dimensions that are creating value of behaving ethically, the community, empowering, conceptual skills, putting subordinates first, emotional healing, and helping subordinates grow and succeed. It is a multidimensional model with a multilevel assessment.

Sendjaya et al. (2008), proposed Servant Leadership with 6 interrelated dimensions with 35 behaviors. The 6 dimensions are Voluntary Subordination, Transforming Influence, Transcendental Spirituality, Responsible Morality, Covenantal Relationship, and Authentic Self. Through an extensive review of literature, Van Dierendonck and Nuijten (2011), developed a multidimensional measurement instrument of Servant Leadership that covers 8 di-

mensions with 30 items. The dimensions are Stewardship, Humility, Authenticity, Courage, Accountability, Forgiveness, Empowerment, and Standing back. Reed et al. (2011), developed a comprehensive model of Servant leadership scale measurement based on the work of Walumbwa et al. (2010), Brown and Treviño (2006), Page and Wong (2000), Wong and Page (2003), Barbutto and Wheeler (2006), Liden, et al. (2008), and Ehrhart (2004). They concluded the scale in 55 items. The model is focused on the executive and ethical dimensions of Servant Leadership and its impact on the follower.

Servant Leadership Dimensions and Behaviors

Servant leadership can be defined as “a holistic, multidimensional approach to leadership that encompasses the rational, relational, ethical, emotional, and spiritual sides of both leaders and followers” (Sendjaya and Cooper, 2011). This holistic approach incorporates many dimensions (e.g., morality, spirituality, authenticity, and integrity) that are often individually or partially but never completely addressed in other leadership approaches (Liden et

Table 1 Servant Leadership Dimensions and Behaviors

Dimension	Definition	Values
Voluntary Subordination	A willingness to take up opportunities to serve others whenever there is a legitimate need, regardless of the nature of the service, the person served, or the mood of the servant leader	Being a servant Act of Service
Authentic Self	A consistent display of humility, integrity, accountability, security, and vulnerabilityA willingness to work quietly behind the scenes, spend time on small things and make seemingly inconsequential decisions in an unrewarded and unnoticed fashion	Humility Integrity Accountability Security Vulnerability
Covenantal Relationship	Engaging with and accepting others for who they are, not for how they make servant leaders feel	Acceptance Availability Equality Collaboration
Responsible Morality	Ensuring that both the ends they seek and the means they employ are morally legitimized thoughtfully reasoned and ethically justified	Moral reasoning Moral action
Transcendental Spirituality	Attuned to the idea of calling in seeking to make a difference in the lives of others through service, from which one derives the meaning and purpose of life	Transcendental beliefs Interconnectedness Sense of mission Wholeness
Transforming influence	Positively transforming others in multiple dimensions (e.g. emotionally, intellectually, socially, and spiritually) into servant leaders themselves	Vision Empowerment Modeling Mentoring Trust

Source: Sendjaya (2015)

al., 2008; Barbuto & Wheeler, 2006; Sendjaya and Sarros, 2002).

Sendjaya et al. (2008), proposed Servant Leadership with six interrelated dimensions with 35 behaviors. The 6 dimensions are Transforming Influence, Transcendental Spirituality, Responsible Morality, Covenantal Relationship, Authentic Self, and Voluntary Subordination. Voluntary Subordination (VS) is defined as a leader's behavior that demonstrates his or her self-concept and attitudes (being a servant) as well as his or her primary intent in doing the acts of service. (Foster, 1989; Sendjaya, 2005). Authentic self (AS) is defined as a leader's behavior which indicates his or her authentic self-positioning with others and characterized by humility, security, integrity, vulnerability, and accountability. (Autry 2001). Responsible Morality (RM) is defined as a leader's behavior that elevates both leaders' and followers' moral convictions and actions (Sendjaya, 2005). Transcendent Spirituality (TS) is defined as a leader's behavior that manifests an inner conviction that something or someone beyond self and the material world exists and makes life complete and meaningful. Transforming Influence (TI) is defined as a leader's behavior that inspires and assists employees to be what they are capable of becoming. Table 1 present the dimensional behavior of Servant leadership.

Servant Leadership in Higher Education

Sendjaya (2015), showed that servant leadership is a better predictor than transformational leadership and it also explains additional variance on team performance, employee satisfaction, commitment and intention to stay, in-role performance, and firm performance. The research before confirmed the reliability and validity of servant leadership to be applied in the corporate context. Higher education institutions are complex, resources are scarce, and competition for prestige and rankings is fierce. With these factors at play, it is no surprise that ineffective leadership exists. Leading within these organizations is immensely challenging because leaders are faced with tough decisions relating to cutting budgets, freezing pay raises or eliminating programs (Barnes, 2015). Much of the leadership literature

or researches is in the affirmative for non-academic organizations and not for colleges and universities (Barge and Musambira, 1992). This statement is similar to Harris (2004), that writes 'Few research studies have focused on leadership practices in higher education, little research has focused on the means for increasing effectiveness, particularly at the departmental level'. Harris (2004), wrote that: 'While a few research studies have focused on leadership practices in higher education, little research has focused on the effectiveness of the means for increasing effectiveness, particularly at the departmental level'. Barge and Musambira (1992), wrote: 'Do chair-faculty relationships within academic institutions make a difference for the department and the university?' While much of the leadership literature answers in the affirmative for nonacademic organizations, this question has not been empirically tested in colleges and universities.

Wheeler (2012), looked to motivate leaders in academia to consider the servant leadership approach over other more traditional leadership models. He wrote, "If your goal is to create or enhance a culture that promotes service, individual and collective responsibility, positive and effective relationships, and strong ethics, servant leadership may be the means to your goals". The purpose of this paper is to verify the validity and reliability of the servant leadership behavior scale for the academic leader in higher education. This research uses servant leadership behavior scale that has been created by Sendjaya since it has been applied previously in Indonesia. This research will contribute to knowledge, especially in the field of servant leadership practice in higher education. By knowing the validity and reliability of the servant leadership behavior scale in the context of higher education, it is expected that the instrument can be used to measure the leadership level of the academic leaders and help the leaders to be more effective in their roles.

METHOD

This study does a quantitative research methodology with 120 participants as samples. All of them are lecturers in several departments of study. There

are 15 cross-discipline Study Departments. The measurement instrument is SLSB (Servant Leadership Scale Behavior) from Sen Sendjaya. The questionnaire consists of 6 dimensions of Servant Leadership with 15 values and 35 questions (Sendjaya et al., 2008). To evaluate the model quantitative data analysis is applied using Second-Order Confirmatory with PLS.

RESULTS

Table 2 Respondent Profile Based On Department

Study program	Frequency	Percentage
FEH	7	6
MED	8	7
PSY	4	4
CBZ	8	7
IHTB	9	8
IBM	24	21
FTO	3	3
ACC	5	5
COM	7	6
VCD	9	8
FDB	3	3
IMT	6	5
ISB	4	4
INA	9	8
MEM	5	5
Total (15 study program)	111	100

Table 3 Respondent Profile Based On Age

Age	Frequency	Percentage
< 25 years	16	14
26 to 35 years	54	49
36 to 45 years	33	30
>45 years	8	7
Total	111	100

Measurement Model Evaluation.

Two stages construct of second-order Confirmatory Factor Analysis (CFA). The first stage is to analyze the latent dimension construct to the indi-

Table 4 Respondent Profile Based on The Length of Work

Length of work	Frequency	Percentage
< 3 years	55	49
3 sd <6 years	25	22
6 sd < 9 years	15	14
>9 years	16	15
Total	111	100

cators and then to analyze the latent construct to the dimensions. The model uses the first-order reflective indicator and second-order formative latent construct. We recommend analyzing with PLS using the repeated indicators approach (Latan dan Ghazali, 2012) where all the latent construct indicators will be used ad second-order construct indicators.

First Stage Evaluation: Evaluation of Outer Model

Evaluation of the Outer Model is a measurement model to measure all research variables. We use several tests such as convergent validity, discriminant validity dan reliability

Convergent Validity

To do the convergent validity we use loading factor and Average Variance Extracted (AVE) values. The indicator loading outer is valid if the value is bigger than 0.5. (Hair et al., 2014). Similar to this the Average Variance Extracted (AVE) value is valid if it is higher than 0.5 (Hair et al., 2014). Table 5 below shows the outer loading value for each variable.

Average Variance Extracted (AVE)

We also calculate the Average Variance Extracted (AVE) on every dimension/variable. The lowest AVE value is 0.5308. This number still higher than the threshold number 0.5 therefore all of the dimension of Servant Leadership is valid (Hair et al., 2014). Table 6 is a summary of the AVE.

Table 5 Voluntary Subordination Description

Measurement Model	Convergent Validity		Critical value	Model Evaluation
	Indicator	Loading Factor		
Voluntary Subordination	P.1	0.7307	≥ 0,5	Good
	P.7	0.8262		Good
	P.13	0.6845		Good
	P.19	0.6769		Good
	P.25	0.7669		Good
	P.30	0.7448		Good
	P.34	0.6384		Good
Authentic Self	P.2	0.4657		Not Good
	P.8	0.7878		Good
	P.14	0.7656		Good
	P.20	0.7837		Good
	P.26	0.6499		Good
	P.31	0.7503		Good
Covenantal Relationship	P.3	0.7234		Good
	P.9	0.6235		Good
	P.15	0.8086		Good
	P.21	0.7923		Good
	P.27	0.745		Good
	P.32	0.7783		Good
Responsible Morality	P.5	0.7536		Good
	P.11	0.6317		Good
	P.17	0.8346		Good
	P.23	0.75		Good
	P.28	0.7601		Good
Transcendental Spirituality	P.4	0.7888		Good
	P.10	0.7892		Good
	P.16	0.6461		Good
	P.22	0.8672		Good
Transforming influence	P.6	0.8255		Good
	P.12	0.758		Good
	P.18	0.7779		Good
	P.24	0.6942		Good
	P.29	0.7227		Good
	P.33	0.6592		Good
	P.35	0.7498		Good

Table 6 Average Variance Extracted (AVE)

No	Dimension	AVE
1	Voluntary Subordination	0.5277
2	Authentic Shelf	0.5038
3	Convenantal Relationship	0.5591
4	Responsible Morality	0.5607
5	Transcendental Spirituality	0.6036
6	Transforming Influence	0.5517

Discriminant Validity

The next stage is to test the discriminant validity. We use the cross-loading value between the indicators and their construct. This test aims to evaluate the measured indicator blocks. The indicator is considered valid when it has the highest loading value in the constructed variable. The loading indicator value is compared to each construct variable to see which construct variable has the highest value. Table 7 shows the cross-loading value.

Table 7 Cross loading value

	V1	V2	V3	V4	V5	V6	v7
P1	0.7307	0.5613	0.5051	0.5291	0.5764	0.5966	0.6368
P10	0.621	0.5926	0.6014	0.6827	0.7892	0.6917	0.7107
P11	0.556	0.523	0.5329	0.6317	0.4036	0.5739	0.588
P12	0.6996	0.7004	0.6272	0.7286	0.6737	0.758	0.7579
P13	0.6845	0.5595	0.4519	0.5883	0.5715	0.5954	0.6255
P14	0.642	0.7656	0.6019	0.6626	0.5547	0.667	0.7059
P15	0.6468	0.6531	0.8086	0.6354	0.5395	0.6412	0.7143
P16	0.5874	0.4883	0.4625	0.5166	0.6461	0.493	0.5701
P17	0.6769	0.7155	0.671	0.8346	0.5813	0.7168	0.7599
P18	0.6876	0.7091	0.6183	0.69	0.6725	0.7779	0.7533
P19	0.6769	0.5248	0.591	0.5772	0.5021	0.5949	0.6331
P2	0.3773	0.4657	0.4011	0.2496	0.3275	0.303	0.3843
P20	0.6516	0.7837	0.6926	0.6561	0.6648	0.6261	0.7323
P21	0.6126	0.7052	0.7923	0.6309	0.6519	0.6408	0.7269
P22	0.6699	0.6775	0.6663	0.6876	0.8672	0.6813	0.7564
P23	0.6896	0.6675	0.6441	0.75	0.7022	0.721	0.7523
P24	0.5644	0.5598	0.6033	0.6201	0.5191	0.6942	0.649
P25	0.7669	0.6467	0.6952	0.6235	0.6275	0.6543	0.7294
P26	0.5183	0.6499	0.6176	0.5863	0.3718	0.6024	0.6126
P27	0.6212	0.5775	0.745	0.6529	0.4838	0.5947	0.6693
P28	0.5734	0.6306	0.6377	0.7601	0.586	0.6955	0.7012
P29	0.5515	0.5521	0.6127	0.652	0.5667	0.7227	0.6645
P3	0.5566	0.6385	0.7234	0.5807	0.4628	0.6192	0.6532
P30	0.7448	0.6924	0.7088	0.7372	0.6247	0.6826	0.7596
P31	0.5874	0.7503	0.6488	0.6954	0.6242	0.6226	0.7053
P32	0.6412	0.6821	0.7783	0.6949	0.6307	0.7207	0.7515
P33	0.5613	0.5278	0.5224	0.6085	0.4044	0.6592	0.6031
P34	0.6384	0.5363	0.5541	0.4704	0.4032	0.5184	0.5729
P35	0.6079	0.5972	0.6646	0.6205	0.4904	0.7498	0.6847
P4	0.5592	0.5572	0.5339	0.5029	0.7888	0.5296	0.6141
P5	0.6435	0.6314	0.5874	0.7536	0.6088	0.6641	0.7016
P6	0.7011	0.6708	0.6516	0.7634	0.6818	0.8255	0.7793
P7	0.8262	0.696	0.6397	0.7104	0.6557	0.6409	0.7548
P8	0.7222	0.7878	0.6402	0.6638	0.5852	0.6593	0.7363
P9	0.6107	0.5675	0.6235	0.4803	0.5171	0.4742	0.5924

Composite Reliability dan Cronbach Alpha

The next outer model evaluation is a reliability test on the composite reliability and Cronbach Alpha value. The values will show whether the variable is as reliable as the measurement tool. The boundary value for Cronbach Alpha and Composite

Reliability is 0.7. Table 8 shows the Composite Reliability dan Cronbach alpha coefficient of each variable. All the values are larger than 0.7 which means the Composite Reliability dan Cronbach alpha meets the requirement and consider reliable.

Table 8 Composite Reliability and Cronbach Alpha coefficient

No	Dimension	Composite Reliability coefficient	Cronbach alpha Coefficient
1	Voluntary Subordination	0.886	0.8493
2	Authentic Shelf	0.8558	0.7964
3	Covenantal Relationship	0.8831	0.8402
4	Responsible Morality	0.8637	0.8016
5	Transcendental Spirituality	0.8577	0.777
6	Transforming Influence	0.8956	0.8636

DISCUSSION

The purpose of the study is to construct and validate the SLBS (Servant Leadership Behavior Scale) and to measure the quality and the attribute of Servant Leadership behavior of academic leaders in higher education. The sample is all lecturers at the University. It is a saturated sample. The analysis shows that all the dimension and the attribute of the SLBS for the organization is valid to be used in higher education. The composite Reliability coefficient mostly higher than 0.86 and the least coefficient of Cronbach alpha is 0.77 while the rest are around 0.8. This table proves that all the variables are reliable. All six dimensions of servant Leadership are reliable and valid.

Finding from the CFA (confirmatory factor analysis) with N = 120 shows that the magnitude of this Cronbach alpha adequate to validate the dimensions of Servant Leadership. The quantitative analysis supports the validity of the Servant Leadership dimension in higher education. All the 6 dimensions of SLBS (Servant Leadership Behavior Scale) such as Voluntary Subordination, Authentic Shelf, Covenantal Relationship, Responsible Morality, Transcendental Spirituality, Transforming Influence developed by Sen Sendjaja is not unique to the business organization but can be applied for academic leaders in the universities especially in Indonesia.

The behavior scale offers a model for the academic leader who wants to develop their Servanthood in higher education. Some of the signs are considered others' needs and interests above his or her own, not defensive when confronted, affirm his or her trust in me, takes a resolute stand on moral principles, driven by a sense of a higher calling, and articulates a shared vision to give inspiration and meaning to work.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The Confirmation Factor Analysis shows that the SLBS (Servant Leadership Behavior Scale) is a valid measurement scale for Servant leadership in Higher education in Indonesia. The dimensions of the scale represent the characteristics of leadership in university faculties. Transcendental Spirituality is very a unique dimension to capture the spiritual aspect of Asian religious society. The 35 attributes of the scale match the contextual aspect of Indonesian educators.

Recommendations

This CFA is applied for academic leaders in higher education. We recommend further study for the school leader, such as foundation members to

measure the two types of leaders in the education field. The study is based on 11 previous scales from various countries in the world, an Indonesian ethnic-based study will give a better context to the leadership dimension in Indonesia.

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