

Advancing Academic Leadership Preparation: Linking Substantial Methodological Practices and Ample Academic Leadership Behaviors in Public University Context

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Abstract

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Linking substantial methodological practices and ample academic leadership behaviors is a basis to evolve the entire academic leaders in leadership roles and processes in the learning organization context. However, the study that shows the link between substantial methodological practices and ample academic leadership behaviors is scant in the public university terrain. The study intended to discover the best subset of methodological practices which account for advancing complete academic leadership behaviors in the public university context. An equal stratified random sampling technique was employed to draw subjects. The author distributed 450 questionnaires to academic leaders in Ethiopia's six public universities, of which 89%(401) were filled out and returned the questionnaires. Using SPSS-20, a stepwise regression technique was employed to discover the best subset of methodological practices, which predicted imperative leadership behaviors. As a result, the discovered best subset of methodological practices is better at improving instructional leadership behaviors (39%) compared to improving transformational (15%), transactional(12%), and laissez-faire (1.5%) leadership behaviors. More importantly, multifactor feedback, counseling, seminar, and action learning were the best subset, which predict instructional leadership behaviors. Besides, multifactor feedbacks and action learning were the best subset, which predicts transformational leadership behavior. To conclude, there are substantial methodological practices, which account for the development of complete academic leadership behaviors in a public university context. Thus, linking substantial methodological procedures and imperative academic leadership behaviors is a framework of a leadership development model to evolve the entire academic staff in leadership roles and processes within a host university context.

Keywords: Academic Leadership, Complete Leadership Behaviors, Methodological Practices, Public University, Context

1. INTRODUCTION

1.1 Background of the Study

Among the most valuable requirements of learning success in a public university context is integrating ample academic leadership behaviors (Girma, 2022). Nonetheless, little is known about what substantial methodological forms predict ample academic leadership behaviors within a public university context. Most public universities in Ethiopia offer academic leadership development programs. Fewer studies are documented concerning the existence of academic leadership development programs that develop faculty members' leadership skills and help them take on leadership roles in public universities. As a result, leader development differs conceptually from leadership development.

Day (2001) summarizes the differences between leader and leadership development concerning human capital and social capital theories, respectively. Leader development is an individual-based intrapersonal knowledge, skills, and abilities development associated with leadership roles. Besides, leadership development is a collective-based relational interpersonal competency, social awareness, and skill associated with expanding leadership roles and processes in a single organization (Bolden, 2005; Day, 2001; McCauley, 2010). For these authors, academic leader development is about individual-based academic staff classroom training and education to evolve them into leadership roles. Then, leader development is about individual base knowledge, ability, skills, and experience development in context. However, academic leadership development is about the entire academic staff's preparation in leadership roles and processes using the social capital network development notions in one single public university context. Thus, the leadership development processes have been done for either social capital (SC) to build leadership development or human capital (HC) approach to shape leader development (Brass & Krackhardt, 1999; Day, 2001).

In this concern, the SC provides the social media network that helps expand ample academic leadership behaviors within the entire leaders from the classroom instructors to the chief executive officer team to evolve them in academic leadership roles and processes. Moreover, the university holds highly skilled human capital, in which individuals embrace more than one qualification. In this wisdom,

intellectual capital ¹(IC) that includes social capital as one of the functions is useful media to provide technological networking to expand leadership competencies such as knowledge, ability, skills, and experiences (Brass & Krackhardt, 1999; Day, 2001; Jurczak, 2008). However, much less is documented about considerable methodological tools that help to expand academic leadership behaviors within the entire institutional members to advance academic leadership competencies in a public university context.

In the literature, scholars reported the preferred methodological practice which helps to acquire knowledge and skills in leadership development (Bolden, 2005; Day, 2001). The scholars noticed substantial methodological practices in leadership development, such as providing an elective course in MA or Ph.D. programs, 360-degree feedback or appraisal, coaching, mentoring, networking, job assignments, and action learning. Some scholars acknowledged the contributions of the mentioned methodological forms in leadership development programs in a single organizational context such as higher education (Bolden, 2005, 2006; Bush & Grover, 2004; Day, 2001; Drath et al., 2008; Leskiw & Singh, 2007). Some of the mentioned methodological practices in leadership development include tools, which have been derived from contemporary leadership theories.

The widely employed contemporary leadership theories for appraisal and measuring existing leadership behaviors have been acknowledged as development tools in the education subsectors. The focused contemporary leadership theories are a full-range leadership development model (Bass & Avalor, 1995) and a full-scale instructional leadership development model (Hallinger et al., 2013). As evidence, the Multifactor Leadership Questionnaire (MLQ) is a tool usually used as a multifactor feedback tool for two purposes, to develop leadership behaviors and to measure full range leadership efficacy in the organization, including university context (Barbuto et al., 2009; Carter et al., 2005; Day, 2001; Giber et al., 2009). However, Principal Instructional Management Rating Scale (PIMRS) is a frequently used instrument to measure the full-scale principal instructional management characteristics and to develop the school principals' instructional management competencies (Hallinger, 2003, 2008; Hallinger et al., 2013). However, the two contemporary theories do not independently address the mentioned purposes.

¹ IC integrates the intangible aspects of SC (group contribution), HC (individual contribution), and structural capital (StC); StC (institutional intangible assets) further splits into technological capital (TC), organizational capital (OC), and business capital (BC) (Jurczak, 2008).

Nevertheless, the two theories' complement is effective in both appraising faculty members and measuring leadership effectiveness in a learning organization (Hallinger, 2003; Stewart, 2006).

More importantly, Girma (2022) verified the complementarity nature of the full-range leadership and the full-scale instructional leadership models in a public university context. He employed stepwise regression analysis to investigate the best model, which includes imperative full-range and full-scale leadership behaviors that predict leadership outcomes. Accordingly, the study justified that the two leadership models commonly support the development of the entire faculty members in leadership roles and processes. Girma (2022) further calls the combination of the full-range leadership development model (Bass & Avalorio, 1995) and full-scale instructional leadership model (Hallinger et al., 2013) would be a "complete academic leadership behaviors model." This is because the two contemporary leadership models are not complete alone to develop the entire faculty members and to measure the entire academic leadership efficacy (from classroom instruction up to the chief executive officer's role) in a public university context.

In this esteem, the researcher was motivated to investigate the substantial methodological practices in leadership advancement, which best predict the complete academic leadership behaviors in Ethiopia's public university context. Accordingly, the present study further examined if the best subset of methodological practices predicts complete academic leadership behaviors. The notions produced a complete academic leadership development model. This is because the two models are not enough to separately employ as a full leadership model in a learning organization (Marks & Printy, 2003; Stewart, 2006).

In this concern, the best methodological practices in leadership development were independent variables; whereas, a tool constructed from the contextually modified and conceptually complemented tools (MLQ-5X, PIMRS) was taken as dependent variables. Originally, Bass and Avolio (1995) formulated MLQ from the full-range leadership development model. Whereas, Hallinger and his colleagues contributed the PIMRS tool from the full-scale instructional leadership model. A combination of the two tools is assumed to fill the theoretical gap that lacks the two leadership models independently for two purposes. First, to develop complete academic leadership behaviors from the classroom level up to chief executive team members within a university context. Second, to measure the integrated academic leadership characteristics in a higher learning organizational context.

In leadership preparation, coaching, mentoring, action learning, networking, and job assignments are the best methodological practices frequently noticed in the literature reviews (Bolden, 2005; Day, 2001; McCauley et al., 2010). Among them, coaching and mentoring are the widely vibrated tools in the academic leadership preparation of learning organizations. In this concern, coaching is a one-to-one and face-to-face type of learning form; whereas mentoring is a face-to-face learning for more than one class size. It can be named group coaching. Logically, as the class size decreases, the cost of learning increases. Accordingly, coaching has been noticed by authors in the literature reviews as the most costly development tool compared to mentoring (Day, 2001). In this signal, academic leaders employing coaching methods to evolve subordinates in academic leadership roles and processes in a developing country was a concern of the author addressed in the present study.

Besides, scholars notice that action learning is the best self-development tool. In this regard, some authors notice action learning as the best tool to advance human resources development compared to tools such as multifactor feedback, coaching, and mentoring (Leonard & Lang, 2010). Here, the concern of this study was to recognize if the situation in the research area provides a conducive environment for learning by doing. Moreover, facilitating seminars, employing external consultants, subordinate counseling, and sharing experience through leadership exchange are widely noticed as substantial methodological practices in leadership development within business and non-business organizations (Bolden, 2005; Bolden et al., 2008; Bush & Grover, 2004; Carter et al., 2005; Day, 2001; Giber et al., 2009; Hoba, et al., 2013). These tools are widely noticed as substantial methods in leadership preparation by the proponents of leadership development practices concerning the learning organizational context, including universities.

In this concern, taking Ethiopia's public university as a data source, the authors intended to investigate substantial methodological practices that contributed to the advancement of complete academic leadership behaviors in a higher learning organizational context.

1.2 Statement of the Problem

The utility of substantial methodological practices in leadership advancement is widely acknowledged as a requirement to develop leadership competencies for the success of learning organization, including university context (Bolden et al., 2008; Bush & Grover, 2004; Carter et al., 2005; Giber et al., 2009;

Hoba et al., 2013; McCauley, Van Velsor, & Ruderman, 2010). However, much less is identified about substantial methodological practices that improve ample academic leadership behaviors in Ethiopia's public university context.

In this honor, the full-range leadership development model has been employed to advance the behaviors of academic leaders in learning organizations, including the university context (Barbuto et al., 2009; Bass, 2000). However, the full-range leadership model has less incorporated the instructional aspects of leadership behaviors such as curriculum coordination, support instructions, monitoring student progress, and protecting learning time (Hallinger, 2003). Instead, the full-scale instructional leadership model has less emphasized the transformational aspects of leadership behaviors, such as respecting individual needs and culture building which helps to lead change in learning institutions (Hallinger, 2003; Marks & Printy, 2003; Stewart, 2006). In this respect, the full range of leadership behaviors and the full-scale instructional leadership behaviors in combination support leading change in learning organizations. Nevertheless, the study that shows substantial methodological practices that account for advancing the combined full-range leadership behaviors and full-scale instructional leadership behaviors is scarce in the literature (Girma, 2022).

In this facet, scholars have frequently noticed the attributions of important methodological practices such as leadership courses, 360-degree feedback, coaching, mentoring, networking, job assignments, and action learning to improve full-range leadership behaviors (Bolden, 2005, 2006; Day, 2001; McCauley, 2010). However, the useful methodological practices, which best improve the complement of a full range of leadership behaviors and full-scale instructional leadership behaviors have not yet been identified in the previous studies in the university context.

Taking Ethiopia's public universities as data sources, the intended study purpose was to investigate vital methodological practices in leadership advancement, which best predict each one of the full range of leadership behaviors and the full-scale instructional leadership behaviors. Aiming to gain a purpose, the author designed the following research question.

What is the best subset of methodological practices, which substantially predicts the transformational, transactional, laissez-faire, and instructional leadership behaviors in a public university context?

1.3 Hypothesis of the Study

In education, the process of inferring numerical data usually employs a null hypothesis. To achieve the goal of this study, Hypothesis 1 was designed and further dissected into four sub-hypotheses. The sub-hypotheses were used to discover the major methodological practices that significantly predict each one of the components of the proposed complete academic leadership behaviors in the study area. In this sense, the null hypothesis and its dissected sub-hypotheses were proposed as follows:

Hypothesis1. There is no association between methodological practices and complete academic leadership behaviors in Ethiopia's public university context.

Hypothesis1.1 There is no relationship between methodological practices and transformational leadership behaviors in Ethiopia's public universities

Hypothesis 1.2 There is no relationship between methodological practices and transactional leadership behavior in Ethiopia's public universities.

Hypothesis1.3 There is no relationship between methodological practices and laissez-faire leadership behavior in Ethiopia's public universities.

Hypothesis1.4 There is no relationship between methodological practices and instructional leadership behaviors in Ethiopia's public universities

1.4 Significance of the Study

The output of this study may inform policymakers, practitioners, and researchers about how the best methodological practices of academic leadership advancement are framed in the university context. Besides, this study informs the methodological practices that best attribute to improving academic leadership behaviors in Ethiopia's public university context. Thus, the result of this study is vital to expanding academic leadership competencies and establishing academic leadership advancement programs for learning organizations.

1.5 Framework of the Study

The present study linked the best methodological practices in leadership preparation, which have been frequently noticed in education leadership preparation research (Bolden, 2005, 2006; Bush & Grover, 2004) for the complemented views of the full range leadership development model that includes transformational, transactional, and laissez-faire behaviors (Bass and Avolio, 2013) and the full-scale

instructional leadership model that emphasis on learning goal, curriculum preparation, and creating learning environment (Hallinger et al., 2013) contextually modified tools (MLQ, PIMRS). The combined concept of the two tools was employed to construct a research tool for the present study that was proposed further as a framework for a complete academic leadership development model within a public university context in Ethiopia.

1.6 Delimitation of the Study

The author delimited the study to the academic leaders in the six samples of Ethiopia's public universities. Besides, the authors delimited the conceptual framework of the study. The link between the best subset of methodological practices in leadership advancement and the complete leadership development model. Further, a research methodological paradigm was delimited to the cross-sectional survey design that led to modeling using stepwise regression analysis.

2. RESEARCH METHODOLOGY

2.1 Population and Sample of the Study

The population of the study was all academic staff in Ethiopia's public universities. In Ethiopia, during data collection, there were 34 public universities labeled as first, second, and third-generation public universities that were 25068 faculty members. Since the present study was designed to recognize the attribution of methodological best practices in academic leadership development, the fourth-generation universities were not incorporated as a sample because of their experience to reflect on the actual leadership preparation. The average population for each of the public universities was above 737, which was greater than the determined sample size ($n = 385$) of Cochran (1977). In this regard, six public universities (two from each one of the generations) were randomly selected, in which the estimated target population was 4422 academic staff.

Further, Cochran's (1977) finite population size correction was employed to compute the sample size, which results in nearly 354 faculty members. The author employed the pilot test response rate (80%) to estimate the sample size of 450 faculty members. Finally, he used equal strata random sampling technique to draw 75 faculty members, including academic officers (band-1, band-2, and band-6) from each of the six public universities in Ethiopia. Since every faculty member has an academic leadership role, the author restricted the sample size of this study to 450 academic leaders. All of the sample

academic leaders rated their immediate leaders in which the total sum was used to generalize for the entire population.

2.2 Measures

The combination of the modified MLQ-5X (Bass & Avolio, 1995), the modified PIMRS tool (Hallinger, 2003, 2008; Hallinger & Murphy, 1985; Hallinger, Wang, and Chen, 2013), and self-developed best methodological practices in leadership advancement question items were employed to construct a questionnaire for the present study. Further, the author employed a stratified sampling technique to collect numerical data from six public universities. He employed a stratified quota sampling technique to draw two sample public universities from each one of the first, second, and third generations. Further, he employed a stratified quota sampling technique to draw 450 academic leaders from the strata of band-1 (engineering and technology), band-2 (natural and computational sciences), and band-6 (social sciences and humanities).

Here, the author employed contextually modified instruments to collect data. Originally, the tools were known as the multifactor leadership questionnaire (MLQ-5X) (Bass & Avolio, 1995) and principal instructional management rating scale (PIMRS) (Hallinger et al., 2013), in which the tools contributed 36 items and 20 items, respectively for the present study. As well, the 11 self-developed rating items questions regarding the best methodological practices of leadership advancement reviewed from the literature (Carter et al., 2005; Giber et al., 2009; McCauley et al., 2010) were also used to examine which best subset of the methodological practices predict the variation of the transformational, transactional, laissez-faire, and instructional leadership behaviors. In this regard, the author employed stepwise regression analysis to investigate the best subset of methodological forms that predict each one of the components of imperative academic leadership behaviors in Ethiopia's public university context.

3. RESULTS AND DISCUSSIONS

In the present study, 401 (89.1%) academic leaders (faculty without officer positions (69.3%) and from the head up to the president (30.7%) filled out and returned the questionnaires. The participants who served in the experience range of 1-3 years (65.8%), 4.6 years (22.9%), and > seven years (11.2%) with the immediate leaders participated in the rating items of the follower form questionnaire. Accordingly,

participants rated their chances and experiences on how they exercised some of the self-developed methodological best practices in leadership advancement elements (11 items). Besides, the contextually modified and conceptually complemented standard questionnaires (MLQ-36 items, PIMRS-20 items) contributed 56 variable items to construct the behavior components of a research tool. The leadership behavior aspects of the questionnaire help followers to rate their immediate academic leaders' behaviors. Thus, the research tool includes 11 items of methodological practices and 56 items of complete academic leadership behaviors, which added 67 items.

For confirmation purposes, the author employed the reliability test for a newly reconstructed tool item to provide evidence of whether the newly developed tool items consistently served the purposes for which they have been designed. As a result, for $N = 401$, the minimum computed Cronbach's Alpha coefficient for the overall complimented leadership behaviors (56 items) was 0.96 and for methodological practices (11 items) was 0.9 at $N = 401$. Further, the computed Cronbach's Alpha coefficient for the overall research tool items (67 items) was 0.97. In this wisdom, the data collected through this tool provided evidence that (97.1%) consistently serves its purposes. Hence, the collected data was statistically analyzable.

In this regard, among the eleven best methodological practices in leadership advancement items used for subordinate rating immediate leaders for the opportunities the participants got advancement, three of the questionnaire items were rated to the mean score value of 2.0 in the scale range from 0 – 4 points as represented in Figure 1. Seminars, action learning, and training for the position of dean and above were rated the average experiences. In addition, participants have rated the items such as counseling, leadership challenge, multifactor feedback, and training for lower-level academic leaders to the perceived values of 1.9 mean scores. The participants rated methodological elements to advance academic leadership was rated lower. Each one of the tool variables, such as leadership courses, coaching, and mentoring perceived mean scores were 1.8 mean scores. In this category, the item of external consultant utility was rated least (1.7) among the best practices of leadership advancement methodological form items.

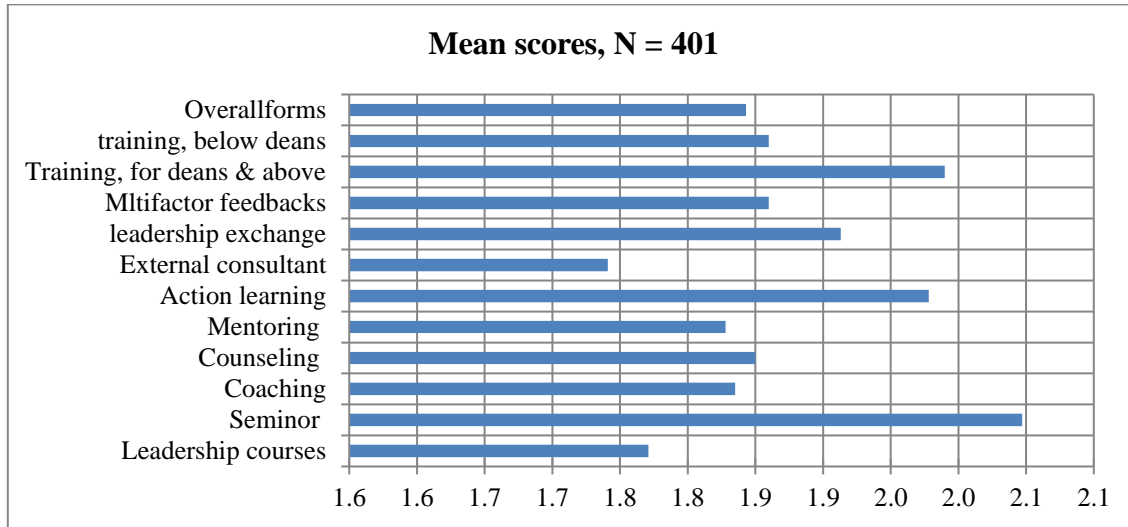


Figure 1: Best practices in leadership preparation

In this sense of participants' self-reflective rating, the methodological practices in preparing academic leaders in leadership roles and processes in the sample public universities were rated lower. Besides, the researcher's interest was to investigate the substantial methodological practices that predict each one of the components of complete academic leadership behaviors in the sample public universities in Ethiopia. For this aspect, the author dissected a hypothesis into four sub-hypotheses. He computed test analysis of sub-hypotheses using the SPSS-20 software to discover the best subset of methodological elements that predict each one of the components of complete academic leadership behaviors in the context of sample public universities.

To arrange the data for the analysis of mean scores of the perceived transformational, transactional, laissez-faire, and instructional leadership behaviors were computed for each one of the subjects using Excel software.

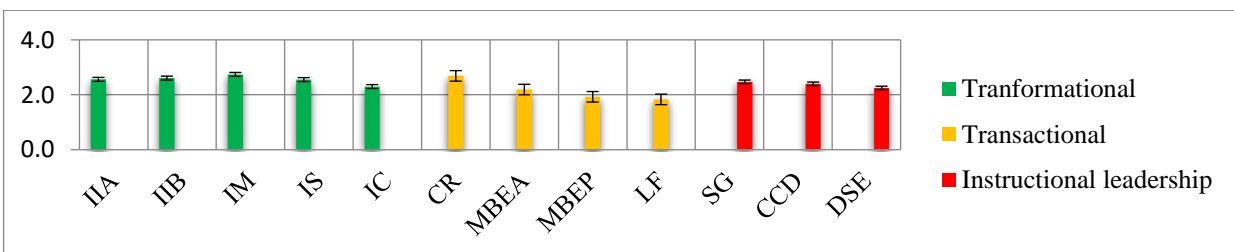


Figure 2: Complete academic leadership behaviors

Hint:IIA=Idealize Influence (attributed), IIB=Idealize Influence (behavior), IM=Inspirational Motivation, IC=Individualized Consideration, CR=Contingent Reward, MBEA=Management by Exception (Active), (MBEP=Management by Exception (Passive), LF=Laissez-faire, SG=Setting Goal, CCD=Coordinating Curriculum Development, BSE=Building School Environments

In this aspect, Figure 2 represents the components of full-range and full-scale leadership behaviors holding transformational, transactional, laissez-faire, and instructional leadership behaviors.

In the figure, the overall perceived values of transformational leadership behaviors ranged from the mean score of inspirational motivation (2.7) to the individualized consideration (2.3). In this sense, the transformational leadership behaviors were below the required standard, with < 3 mean scores.

In the perceived mean score of the full-scale instructional leadership behavior components, setting the goal (2.5) was higher than coordinating learning programs (2.4) and developing a learning climate (2.2). In this regard, except instructional leadership behaviors, the remaining transformational, transactional, and laissez-faire are found partially effective; or else, below the standard set in the literature reviewed (Bass & Avolio, 1995). In this aspect, the best methodological practices, which accounted for improving the characteristics of academic leadership, were test examined in Ethiopia's public university context.

Hypothesis1. There is no significant association between methodological practices and the complement of full-range and full-scale leadership behaviors in Ethiopia's public universities.

The author designed hypothesis one to investigate the best methodological practices, which predict transformation, transaction, laissez-faire, and instructional leadership behaviors through stepwise regression. In using the stepwise regression, recognizing the subjects-to-items variables ratio should satisfy the minimum 5 to 1 ratio. In this study, the subjects (401) to the items (67) ratio was 5.99 to 1. This result satisfied the minimum requirements to manipulate stepwise regression. In this sense, the stepwise regression provides the best subset of predictors for the prospect of leadership advancement modeling.

Hypothesis1.1 There is no significant relationship between methodological practices and transformational leadership behaviors in Ethiopia's public university context.

As shown in the second model in Table 1, the association of the best subset of the three methodological practices of leadership advancement, such as multifactor feedback and action learning (independent variables) and transformation leadership behaviors (dependent variables) was found ($R = 0.4$) moderate.

Table 1: Stepwise regression model summary for H1.1

Mode l	R	R Square	Adjusted Square	R	Std. The error in the Estimate
1	.355 ^a	.126	.124		.7522
2	.390 ^b	.152	.147		.7421

a. Predictors: (Constant), multifactor feedback

b. Predictors: (Constant), multifactor feedback, action learning

In this category, the stepwise regression labeled as the second model was the best sub-sets to produce transformational academic leaders in the samples of public universities in Ethiopia. As shown in the table, stepwise regression labeled two models. The second model was the best subset that includes multifactor feedback and action learning that accounts for the advancement of transformational leadership behaviors.

In this test, the best sub-sets that includes multifactor feedback and action learning accounted for about 15.2% of the variations of transformational leadership behaviors compared to the remaining nine best practices.

Table 2: F-test for the significance of stepwise regression for H1.1

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	31.820	1	31.820	56.234	.000 ^b
	Residual	220.114	389	.566		
	Total	251.934	390			
2	Regression	38.239	2	19.119	34.714	.000 ^c
	Residual	213.695	388	.551		
	Total	251.934	390			

a. Dependent Variable: Transformational behaviors

b. Predictors: (Constant), multifactor feedback

c. Predictors: (Constant), multifactor feedback, action learning

Table 2 represents the associations of the best subset of independent variables (multifactor feedback and action learning) and the dependent variable (transformational leadership development behaviors) that yield model-2 as the best model. In this model, the probability of F statistic ($F = 34.714$) for the regression relationship, which includes variables, is $P < 0.001$, less than the significance level of 0.05. Accordingly, the researcher rejected the null hypothesis, which hypothesis says there is no association between the best subset of methodological practices and transformational leadership behaviors.

Table 3: The t-test for stepwise regression associations for H1.1

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.239	.071		31.560	.000
	Multifactor	.239	.032	.355	7.499	.000
2	(Constant)	2.115	.079		26.844	.000
	Multifactor	.165	.038	.245	4.313	.000
	Action learning	.133	.039	.194	3.414	.001

a. Dependent Variable: Transformational leadership advancement /behaviors

As shown in Table 3 in model-2, the best subset includes multifactor feedback, probability of t-statistic ($t = 4.3$) for the beta coefficient ($P < 0.001$) was less than the level of significance at $\alpha = 0.05$. Similarly, the probability of the t-statistics for action learning ($t = 2.50$) for the beta coefficient ($P < 0.001$) was less than the level of significance at $\alpha = 0.05$. In this sense, for each of the elements of the subset of the independent variables, such as multifactor feedback and action learning, the test rejected the notion of the null hypothesis that there is no association between the best subset of the methodological forms (independent variables) and the developed transformational leadership behaviors used as the dependent variable in this study combination.

The test results were in line with the findings in the previous studies. Some studies concluded that multifactor feedback and action learning were the best practices for improving transformational behaviors (Conger & Riggio, 2007; Day, 2001; McCauley, 2010; Sosik & Jung, 2010). Multifactor feedback is usually employed to evaluate individual leaders. Expanding the processes of individual leaders' evaluation in the academic network and providing appropriate feedback can help to improve the network of academic leadership behaviors. The problem with a point is if the evaluator has failed to provide feedback for each one of the points employed to evaluate subordinates.

In this case, the evaluation can be discouraging rather than preparing academic leaders for leadership roles and processes. Moreover, expanding the preparation of leaders into the network of academic leadership preparation can never occur. Such problems may appear when an initial stage of leadership advancement fails to attract appropriate officers to the respected academic position (Leskiw & Singh, 2007). Scholars have verified that the quality of recruiting and selection processes of potential candidates determines the quality of leadership advancement processes in organizations.

In addition, action learning was also investigated as the best method to predict transformational leadership behaviors and is widely known as learning by doing. In literature, action learning has also been considered the best method to build leadership advancement. It focuses on a small amount of skills advancement (Leonard & Lang, 2010). Authors noticed that action learning was the best method to build leadership competencies compared to multifactor feedback, coaching, or mentoring.

Thus, multifactor feedback and action learning were tools for improving transformational leadership behaviors compared to the remaining nine leadership advancement methodological forms depicted in Figure-1 in Ethiopia's public university context. In this sense, the labeled best subset of the methodological practices of leadership advancement can help to prepare faculty members and academic officers to evolve in transformational leadership behaviors in Ethiopia's public universities.

Hypothesis 1.2 There is no significant relationship between methodological practices and transactional leadership behavior in Ethiopia's public universities.

Table 4 represents the stepwise regression results that predict three models in which the best subset of the model includes three independent variables that predict the transactional leadership behaviors in the sample public universities in Ethiopia. In the table, the association of the three methodological

practices (mentoring, training for lower academic officers, formal leadership courses) as the best subset of independent variables and the transactional leadership behaviors as dependent variables was found ($R = 0.4$) nearly moderate.

Table 4: Stepwise regressions model summary for H1.2

Model	R	R Square	Adjusted Square	R	Std. The error in the Estimate
1	.288 ^a	.083	.080		.6478
2	.327 ^b	.107	.102		.6400
3	.345 ^c	.119	.112		.6364

a. Predictors: (Constant), mentoring,

b. Predictors: (Constant), mentoring, training

c. Predictors: (Constant), mentoring, training, leadership courses

In this regard, the variation in the proportion of the learned transactional leadership behaviors that accounted for because of mentoring, training, and formal leadership courses was 11.2%; whereas the remaining nine methodological elements were less preferred to prepare academic leaders in transactional leadership behaviors in the study area.

Table 5 represents the F-statistics for the models that show the regression relationships between the best sub-sets of the independent variables (model-1, model-2, and model-3) and the dependent variable (the learned transactional leadership behaviors) in the sample public universities. As shown in the table model-3 include the best subset of the independent variables (mentoring, training for lower academic officers, and providing formal leadership courses). The model was preferred to prepare academic leaders for transactional leadership behaviors.

Table 5: F-test for the significance of stepwise regression for H1.2

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	14.712	1	14.712	35.062	.000 ^b
	Residual	163.222	389	.420		
	Total	177.934	390			
2	Regression	18.991	2	9.495	23.180	.000 ^c
	Residual	158.943	388	.410		

Model		Sum Squares	of Df	Mean Square	F	Sig.
3	Total	177.934	390			
	Regression	21.221	3	7.074	17.468	.000 ^d
	Residual	156.713	387	.405		
	Total	177.934	390			

a. Dependent Variable: Transactional

b. Predictors: (Constant), mentoring

c. Predictors: (Constant), mentoring, training

d. Predictors: (Constant), mentoring, training, attaining leadership courses

The probability of the F statistic ($F = 17.468$) for the regression relationship, which includes the variables in this model is $P < 0.001$, less than the significance level of 0.05. In this regard, the researcher rejected the null hypothesis that says there is no association between the best subset of independent variables (methodological forms of leadership advancement) and the dependent variable (learned transactional leadership behaviors).

Table 6: The t-test for stepwise regressions for H1.2

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.955	.060		32.538	.000
	Mentoring	.163	.027	.288	5.921	.000
2	(Constant)	1.848	.068		27.155	.000
	Mentoring	.115	.031	.203	3.716	.000
	Training, for lower officers	.104	.032	.177	3.232	.001
3	(Constant)	1.812	.069		26.153	.000
	Mentoring,	.088	.033	.156	2.704	.007
	Training, for lower officers	.087	.033	.149	2.676	.008
	Attaining leadership courses	.065	.027	.129	2.346	.019

a. Dependent Variable: Transactional leadership advancement/ behaviors

As shown in Table 6, the stepwise regression labeled the best subset of independent variables (mentoring, attaining training at the program execution level, and attaining leadership courses) that predict the dependent variable (transactional leadership behaviors) and constituted model-3. In the model, for the independent variable of mentoring, the probability of the t-statistic ($t = 2.7$; $P = 0.007$) was less than the significance level at $\alpha = 0.05$. In this model, the probability of the t-statistic for independent variables of providing training for lower-level academic officers ($t = 2.68$; $P = 0.008$) and attaining leadership courses ($t = 2.35$; $P = 0.019$) was less than the level of significance at $\alpha = 0.05$.

In this regard, for each of the best subsets of the methodological practices, the researcher rejected the notion of the null hypothesis that there is no association between the methodological best subset of the leadership advancement (independent variables) and the learners' transactional leadership behaviors (dependent variable). In this category, among the 11 best methodological practices of leadership advancement, self-rated items, the three independent variables such as mentoring, the training on the academic program execution stage, and attaining the leadership courses were justified as the best subset to predict transactional leadership behaviors.

Thus, the best subset of methodological elements was appreciated to prepare faculty members and academic officers for transactional leadership behaviors. The remaining nine tools were insignificant to prepare academics for transactional leadership behaviors in the study area.

Hypothesis1.3 There is no significant relationship between methodological practices and laissez-faire behaviors in Ethiopia's public universities.

Table 7: Model summary of Stepwise regression for H1.3

Model	R	R Square	Adjusted R Square	Std. The error in the Estimate
1	.124 ^a	.015	.013	.9707

a. Predictors: (Constant), Leadership exchange

Table 7 represents the associations between the best subset of methodological practices of leadership advancement and laissez-faire behavior. In this stepwise regression, the best methodological element that create a significant association with laissez-faire behavior ($R = 0.124$) was the leadership exchange, which shares experiences through observations or visits. In this sense, the laissez-faire behavior might have been built by sharing experience for about 1.5%; whereas the remaining ten best practices of

leadership advancement did not show a significant importance that predicts the role of laissez-faire behavior.

Table 8: F-test for the significance of stepwise regression for H1.3

Model		Sum of Df	Mean Square	F	Sig.	
1	Regression	5.693	1	5.693	6.042	.014 ^b
	Residual	366.502	389	.942		
	Total	372.194	390			

a. Dependent Variable: Laissez-faire behaviors

b. Predictors: (Constant), Leadership exchange

As shown in Table 8, the probability of the F statistic ($F = 6.04$, $P = 0.014$) for the association between sharing experiences and laissez-faire behaviors at $\alpha = 0.05$, was found statistically significant. Moreover, the t-statistics ($t = 2.5$, $P = 0.014$) at $\alpha = 0.05$ between the association of the independent variable and the dependent variable were found significant. In this sense, experience sharing was the best predictor of laissez-faire behaviors; whereas the remaining of methodological practices in leadership advancement were insignificant for laissez-faire leadership behaviors in the learning organizations.

So, laissez-faire behavior accounts for predicting academic leadership development outcomes; whereas leadership exchange contributes to predicting laissez-faire behavior for about 1.5% of Ethiopia's public universities. In this study; however, the association of laissez-faire leadership behaviors and leadership outcomes (extra effort, effectiveness, and satisfaction) was found out negatively significant. This association indicates that laissez-faire behaviors and leadership outcomes are inversely proportional (Avolio et al., 1999; Avolio et al., 2010; Bass, 1997, 1999).

Table 9: The t-test for stepwise regressions for H1.3

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.646	.091		18.097	.000
Leadership exchange	.098	.040	.124	2.458	.014

a. Dependent Variable: Laissez-faire behavior

As a result, reducing laissez-faire behavior logically accounts for enhancing academic leadership advancement outcomes in the public university context. In this sense, expanding the processes of sharing experiences on how and when to reduce laissez-faire behaviors is reasonably attributed to expanding academic leadership competencies in the public university context. This means that highly skilled academic personnel know their tasks, duties, and responsibilities. By the way, the presence of an immediate academic leader should occasionally build subordinates in academic leadership roles and processes in Ethiopia's public university context. In this test, sharing experiences as leadership exchange forms was the method that meaningfully justified the attribution of laissez-faire behaviors in higher education. Experience has been noticed frequently as the best school in leadership advancement practices (Conger & Riggio, 2007; McCauley et al., 2010). This is because the improvement of laissez-faire behavior is attributed to improving leadership outcomes, in which the consequences show members' commitment toward institutional goals. Thus, learning from the challenging experiences of leadership advancement is learning from the core ore of sharing experiences.

Hypothesis 1.4 There is no significant relationship between methodological practices and instructional leadership behaviors in Ethiopia's public university context.

Table 10: Model summary of Stepwise regression for H1.4

Model	R	R Square	Adjusted Square	R	Std. The error in the Estimate
1	.533 ^a	.284	.282		.8468
2	.605 ^b	.366	.363		.7978
3	.618 ^c	.382	.377		.7886
4	.625 ^d	.391	.385		.7840

a. Predictors: (Constant),

b. Predictors: (Constant), multifactor feedback, counseling

c. Predictors: (Constant), multifactor feedback, counseling, seminar

d. Predictors: (Constant), multifactor feedback, counseling, seminar, and action learning

Table 10 represents the stepwise regression relationship between the best subset of independent variables and the learned instructional leadership behaviors. As shown in Table 10, the stepwise regression labeled model-4 as the best subset of independent variables that predict instructional leadership behaviors as dependent variables. In this category, the association between the best subset

of the four methodological practices in leadership advancement (multifactor feedback, counseling, seminar, and action learning) and the instructional leadership behaviors ($R = 0.63$) was too strong compared to the full-range leadership practices.

Moreover, the contributions of the best subset of methodological practices were accounting to develop instructional leadership behaviors for about 39% proportion. Out of the 11, seven methodological elements in leadership development were insignificant to preparing academic leaders in the focus of instructional leadership behaviors in the study area.

Table 11: F-test for the significance of stepwise regression for H1.4

Model		Sum Squares	of Df	Mean Square	F	Sig.
1	Regression	110.529	1	110.529	154.132	.000 ^b
	Residual	278.954	389	.717		
	Total	389.483	390			
2	Regression	142.502	2	71.251	111.933	.000 ^c
	Residual	246.981	388	.637		
	Total	389.483	390			
3	Regression	148.807	3	49.602	79.759	.000 ^d
	Residual	240.676	387	.622		
	Total	389.483	390			
4	Regression	152.220	4	38.055	61.911	.000 ^e
	Residual	237.263	386	.615		
	Total	389.483	390			

a. Dependent Variable: Instructional leadership advancement/behaviors

b. Predictors: (Constant), multifactor feedback

c. Predictors: (Constant), multifactor feedback, counseling

d. Predictors: (Constant), multifactor feedback, counseling, seminar

e. Predictors: (Constant), multifactor feedback, counseling, seminar, and action learning

Table 11 represents the F-statistics that show the regression relationships between the best subset of methodological practices of leadership advancement and instructional leadership behaviors. As shown in the table, stepwise regression labeled four models, and the fourth model was interpreted as the best

subset of methodological practices that predict instructional leadership behaviors. In this test, the best model includes multifactor feedback, counseling, seminar, and action learning that help to prepare academic leaders for instructional leadership behaviors, if not, to predict instructional leadership behaviors as a learning goal of the activities. In model-4 of this variation test, the probability of the F statistic ($F = 61.911$, $P = 0.000$) for the regression relationship that includes the mentioned four variables is $P < 0.001$, less than or equal to the level of significance of 0.05. In this regard, the researcher rejected the null hypothesis that there is no association between the best subset of leadership advancement forms and instructional leadership behaviors.

Table 12: The t-test for stepwise regressions for H1.4

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.536	.080		19.239	.000
Multifactor feedback	.446	.036	.533	12.415	.000
2 (Constant)	1.318	.081		16.203	.000
Multifactor feedback	.305	.039	.364	7.774	.000
Counseling	.261	.037	.332	7.087	.000
3 (Constant)	1.214	.087		13.997	.000
Multifactor feedback	.278	.040	.332	7.011	.000
Counseling	.183	.044	.233	4.157	.000
Seminar/workshop/meeting	.146	.046	.174	3.184	.002
4 (Constant)	1.162	.089		13.066	.000
Multifactor feedback	.245	.042	.293	5.864	.000
Counseling	.139	.048	.176	2.912	.004
Seminar/workshop/meeting	.130	.046	.156	2.833	.005
Action learning	.114	.049	.135	2.356	.019

a. Dependent Variable: Instructional leadership behaviors

Table 12 also represents the t-statistics, regression relationship between the best subsets of methodological practices in leadership advancement, and the developed instructional leadership behaviors in the sample public universities in Ethiopia. As shown in the table, the projected

model-4 is the best subset of the independent variables, the probability statistics of the multifactor feedback ($t = 5.9$, $P < 0.001$), counseling ($t = 2.9$, $P = 0.004$), seminar ($t = 2.8$, $P = 0.005$), and action learning ($t = 2.4$, $P = 0.019$) in which each of the p-values was found less than the level of significance at $\alpha = 0.05$.

In this test of category, among the 11 essential methodological practices in leadership advancement items, the four, namely multifactor feedback, counseling, seminar, and action learning constituted the best subset of those predicting instructional leadership behaviors. The remaining seven methodological forms were not attributed to predicting the development of instructional leadership behaviors in higher-learning organizations.

Consequently, the labeled best subset of the independent variables, such as multifactor feedback, counseling, seminar, and action learning, were the tools that helped to prepare academic leaders for instructional leadership roles. In the present study, the author employed the stepwise regression analysis technique to investigate the best models of methodological forms that predict the advancement of academic leadership behaviors.

Table 13: Methodological practices accounting for the advancement of academic leadership behaviors

	Advancing activities	Descriptions	Major advancement goal
1	Multifactor feedback	Multi-source ratings of performances with immediate and transparent comments,	Transformational and instructional behaviors, beliefs
2	Action learning	Project-based experiential learning to reduce the focused problem; or else, learning by doing,	Transformational and instructional behaviors, beliefs
3	Mentoring	The formal processes of senior advising the juniors/ less experienced faculty members,	transactional leadership behaviors
4	Off-the-job training	Providing formal leadership education and training/courses,	transactional leadership behaviors
5	On-the-job training	Providing informal leadership education and training/courses,	transactional leadership behaviors
6	Leadership exchange	Learning through sharing experiences; learning through dyadic relationship	Reduces laissez-faire behaviors such as absenteeism when needed

	Advancing activities	Descriptions	Major advancement goal	
7	Counseling	The processes of advising the best way for academic leaders to improve academic management in public universities,	Instructional behaviors	leadership
8	Seminar/staff meeting	The processes of disseminating the governor's intention towards institutional goals,	Instructional behaviors, values	leadership

Hint: ALD = *Academic Leadership advancement*

Taking the overall results of the present study, the author summarized substantial methodological practices in leadership advancement in Table 13, which helped to prepare the entire academic leaders for leadership roles and processes in a public university context. As a milestone, there is a need to consider human capital outsets to develop individuals' aspect of leadership competency preparation that arrives at leader development.

Further, there is a need to social capital notions to create social network media to expand ample academic leadership behaviors among the entire faculty members to evolve them in leadership roles and processes (Brass & Krackhardt, 1999; Day, 2001). Furthermore, employing intangible intellectual capital that includes structural capital is better than social media networking to expand leadership competencies within faculty members to evolve them in leadership roles and processes in a public university context (Jurczak, 2008). This is because structural capital further employs institutional intangible assets such as technological capital (TC), organizational capital (OC), and business capital (BC) to expand the necessary academic leadership competencies with or without face-to-face interaction in highly skilled networking systems in an organization.

In this study, there were four best methodological practices attributed to predicting instructional leadership behaviors as well as transformational leadership behaviors. This means multifactor feedback, counseling, meeting, and action learning can help to expand leadership competencies and to develop instructional leadership behaviors in learning organizations. As well, the combination of multifactor feedback and action learning methods which best predicted transformational leadership behaviors have strong support in the literature (Conger & Riggio, 2007; Day, 2001; McCauley, 2010; Leonard & Lang, 2010; Sosik & Jung, 2010).

Accordingly, the best subset of methodological practices, which include multifactor feedback, counseling, seminars, and action learning contributed to improving instructional leadership and transformational leadership behaviors in a public university context. In this sense, as Hallinger (2003), Marks and Printy (2003), and Stewart (2006) proposed to integrate the instructional and transformational leadership conceptions for one purpose in the learning organization, the instructional and transformational leadership behaviors can be utilized as complementary concepts to prepare academic leadership advancement programs in the public university context.

In general, the best methodological practices of leadership advancement elements were better for instructional leadership behaviors (39%) development compared to the contributions of transformational (15%), transactional (12%), and laissez-faire (1.5%) leadership behaviors in the present study in Ethiopia's public universities. Although coaching has evidence in the literature as the best practice for leadership advancement in a university context (Bolden et al., 2008; Braun et al., 2009), the present study revealed less employment in Ethiopia's public university context. Moreover, scholars noticed that coaching and mentoring were preferred in the training document used in the leadership advancement program of higher education in Ethiopia (GIZ, 2017); whereas, the coaching method utility was less recognized to expand leadership competencies in the present study area context.

In this regard, the role of coaching was less to prepare academic leaders for leadership roles in Ethiopia's public university context. On the other hand, executive coaching requires adequate competency to teach subordinates one by one (Day, 2001), and lack of know-how might be the reason for failure to utilize a study area context. As well, in current literature such as Day (2001) and McCauley (2010), coaching has also been noticed as too expensive because of its one-to-one face-to-face learning. In this aspect, a financial deficiency might be the reason that impedes them from utilizing the notion of coaching in their academic leadership advancement efforts.

Nevertheless, scholars capitalized on coaching in leadership advancement literature (Bolden, 2005; Day, 2001). In this awareness, the author summarized the investigated methodological practices of academic leadership advancement in Table 14. In this summary, the attributions of the best subset of methodological practices in leadership advancement influence each academic leadership behavior. As shown in the table, the best methodological practices of leadership advancement forms, their description in the present study, and the target advancement variables were depicted in line with public

university terrain. Accordingly, the best subset of methodological practices in leadership advancement meaningfully attributing to improving academic leadership behaviors have been modeled in Ethiopia's public university context.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

The transformation of academic leadership advancement is because of the best methodological options to expand the development processes of imperative academic leadership behaviors, beliefs, attitudes, or their combination towards institutional goals in context. The advancement of leadership behaviors usually requires formal, non-formal, or informal dimensions of learning opportunities. In this regard, stepwise regression is the statistical technique employed to discover the best subset of methodological practices that predict important academic leadership behaviors in a public university context. Using intellectual capital network transmission media/tools is better than social capital network distribution media to expand ample academic leadership behavior notions within the highly skilled academic leaders from classroom instructors up to chief executive officer/s.

In the present study, the subset of multifactor feedback, counseling, seminar, and action learning tools is the best model to predict the variation of instructional leadership behaviors (39%); the multifactor feedback and action learning methods are likewise preeminent for predicting the variation of transformational behaviors (15%); mentoring, short-term training and formal leadership learning are similarly best predicting the variations of transaction behaviors (12%); and experience sharing method is also best predicting the variation of laissez-faire behavior (1.5%). In this sense, the best subset of methodological practices is advantageous to improve the full-scale instructional leadership behaviors compared to the full-range leadership behaviors in a public university context.

Accordingly, combining multifactor feedback, counseling, meeting or seminars, and action learning methods help improve instructional leadership behaviors. In addition, combining multifactor feedback and action learning methods are valuable tools to expand transformational leadership behaviors. As well, the combination of mentoring and on-the-job training approaches is the best fit to build transactional leadership behaviors; whereas the experience-sharing tool is the best predictor of laissez-faire behavior compared to the remaining leadership behaviors in a public university context.

At large, multifactor feedback, action learning, sharing experiences, mentoring, self-learning, on-the-job training, and off-the-job training are the methodological tool to enlarge the academic leadership advancement competencies in the public university context. As well, these tools are imperative to shape academic leadership styles, as well as, to expand the instructional, transformational, transactional, and laissez-faire leadership behaviors within faculty members. Further, the link between the best subsets of methodological practices and the imperative academic leadership behaviors accounts for leadership development model that includes procedural and substantive aspects of the "academic leadership development model." This model is valuable to advance academic leadership preparation, particularly in the context of public universities in developing countries such as Ethiopia.

In this regard, the discovered best subset of methodological practices in leadership development is vital to advance academic leadership competencies by expanding the notion of complete academic leadership behaviors through intellectual capital media in a learning organization context. Thus, the discovered link between substantial methodological practices and ample academic leadership behaviors is preferable to expand the necessary academic leadership competencies within the whole academic officers (faculty members and academic officers) to evolve them in academic leadership roles and processes in the public university context.

4.2 . Recommendations

Leadership advancement processes involve all members of the organizations; whereas this study has addressed only the academic leaders of faculty members up to the president. The other sides of stakeholders of the public universities were not involved. Moreover, this study examined the contributions of best practices of leadership advancement to improve leadership behaviors. In this regard, the researcher recommended: (1) practitioners apply the proposed model to expand leadership competencies to acquire the desired leadership behaviors in context, (2) policymakers rethink launching explicitly defined leadership advancement programs for learning organizations such as public universities, and (3) interested researchers can conduct research to show the qualitative aspects of academic leadership advancement in the public university context; Moreover, the planners and policymakers may apply the proposed model of academic leadership advancement particularly in Ethiopia's PHEIs and generally in the developing country's PHEIs.

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