

Developing Student Leadership Readiness, Core Leadership Skills to Enhance Student Engagement through Organization Development Intervention: Action Research at Zhejiang Yuexiu University of Foreign Languages in Zhejiang Province, The People's Republic of China

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Abstract

Student leadership development has captured increasing concern in the field of education. Leadership plays an integral part in the fulfillment of 21st-century skills, namely, career and life skills, to adapt to the changing circumstances and the need to cultivate talent. The present action research aimed to utilize effective OD interventions to develop students' leadership readiness and core leadership skills to enhance student engagement in campus-based extracurricular activities in a private university in China. The action research was conducted in three stages: Pre-ODI, ODI, and post-ODI, starting with diagnosing problems in student leadership, followed by planning, intervening, assessing, and reinforcing. For the eight-month OD intervention, the sample consisted of 80 freshmen randomly selected from the student organization. They were categorized into two groups: an experimental group with ODIs and a control group without ODIs. Data were collected by survey questionnaires, one-to-one interviews, and focus group interviews, using qualitative and quantitative research methodology. Results of the Paired Sample T-Test proved that there were statistically significant differences between the experimental group and the control group after ODIs. Students reported significant gains in leadership readiness and core leadership skills. There was a causal relationship among leadership readiness, core leadership skills, and student engagement. The results of the research suggest that purposeful leadership programs should be promoted in the form of offline and online extracurricular activities to cultivate leadership competency beginning with inward leadership and manifesting in outward leadership.

Keywords: leadership readiness, core leadership skills, student engagement, leadership, organization development intervention

Introduction

Leadership plays an integral part in the fulfillment of 21st-century skills, which are an essential quality in twenty-first century education, as noted in Partnership for 21st-Century Skills (2011). Higher education institutions have a strong commitment to leadership development and have dedicated themselves to cultivating future leaders and to the need for

talent in modern society. With regards to the employability crisis of graduates and the need for universities to advance core competencies and encourage lifelong learning, heated controversy has urged colleges and universities to pay special attention to the advance of graduate quality, together with leadership (Osmani et al., 2015).

China, as an emerging country, plays an increasingly important role in the world. China assumes full responsibility for international affairs and shows leadership as a world power. Not only can the concept of leadership emerge in politics, but it also can be observed in guidance policies and school mission statements. An increasing number of higher education institutions have focused on the quality development of college students' leadership as a vital objective of personnel training and have carried out a wide variety of student leadership practices (Yue & Jia, 2016). Research was conducted by Zhang and Zou (2013) on university students' employability skills from the Chinese employers' perspective. The results showed that industry employers considered interpersonal relationships, teamwork, strain capacity, problem-solving capacity, leadership, information technology software applications, and presentation skills to be very significant skills and abilities. Therefore, it is noticeable that universities are taking responsibility to provide students with those necessary leadership skills and leadership development opportunities that will enable them to better adapt to the workplace.

The purpose of the study is to investigate how to develop student leadership readiness and core leadership skills to enhance student engagement through organization development intervention (ODIs) in Zhejiang Yuexiu University of Foreign Languages, a private Chinese university. It also intends to clarify whether there are any differences in students' leadership readiness, core leadership skills, and student engagement in Pre-ODI and Post-ODI, and whether there is a causal relationship among the three variables.

The present empirical research takes the initiative to develop students' psychological status for leadership positions and core leadership skills by organizing development intervention to enhance students' engagement in school activities. Also, it provides unique insight into the form of leadership cultivation from inward to outward, which can be achieved by teamwork in extracurricular activities. This planned change in students' skills performance contributes to graduates gaining a competitive advantage in the employment market. The preliminary diagnosis was conducted using SWOTAR strategies to comprehensively diagnose the current situation of college student leadership in ZYUFL. It is worthwhile to mention that there were some weaknesses in the preliminary diagnosis: students had a vague understanding of the term 'leadership,' holding the stereotype of leaders as the authority, power, and control; the bureaucracy of the student organization was encountered when students participated in activities; students were deficient in individual problem-solving skills, as well as cooperation skills, communication, and time management.

Need for Action Research

In consideration of the success of student leadership development in the U.S, leadership education and practices have tentatively been integrated into national education reform and quality education in China. On the national level, this attempt is also in

accordance with the need for talent cultivation. Although leadership development targeted toward company managers has gradually prevailed in China, there is a scarcity of leadership development focusing on college students. Action research is needed to diagnose the present situation, as well as to design and implement the appropriate OD interventions. Thus, it is vital to make full use of scientific OD methods, systematic procedures, and special professionals to design an ODI action plan for college undergraduates in the Chinese context to boost student engagement.

Research Objectives

- (1) To examine the current situation of college students' leadership readiness, core leadership skills, and student engagement at private universities in the context of the People's Republic of China.
- (2) To design the practical Organization Development Interventions (ODIs) to develop student leadership readiness, core leadership skills, and to enhance student engagement.
- (3) To determine any differences between the Pre-ODI and Post-ODI regarding leadership readiness, core leadership skills, and student engagement.
- (4) To measure the causal relationship among leadership readiness, core leadership skills, and student engagement.

In view of the significance of leadership development and student engagement, together with the preliminary diagnosis conducted by the researcher, this current research focuses on the improvement of student leadership readiness, and core leadership skills by implementing organization development interventions to enhance student engagement. Hence, the following literature review analyzes the previous studies and their measurements.

Literature Review

Leadership Readiness

The readiness was used to measure the ongoing state of personal knowledge, skills, capability, motivation, and commitment or team status, which were related to a particular situation, effort, or area of performance (Zainab & Baig, 2011). Leadership readiness was the precondition for leadership, which was the preparation for becoming a ready leader before the opportunity came. Saxenian (1965) first put forward the concept of leadership readiness. Avolio and Hannah (2008) claimed that being ready for leadership is closely associated with developmental readiness. Leadership readiness was a sustainable process of giving direction and motivating someone. Therefore, scholars were enabled to create either the state of being ready or the willingness of preparing the person involved for taking the opportunity of taking on leadership positions before they came (Ambreen & Baig, 2011). Hamind and Krauss (2013) examined whether the university campus experience provided more motivation to lead or readiness to lead in one public university in Malaysia. The finding revealed that leadership readiness had a close relationship with the motivation to lead.

Core Leadership Skills

The skills approach is defined as a set of developable skills for effective leadership, which acknowledged that leadership skills could be learned and developed. One significant result was that graduates who got involved in leadership programs were more resourceful and exhibited better performance in the workplace (Jung et al., 2003). Scholars advised institutions to prepare students with the compulsory skill sets that were necessary to provide good leadership in a dynamic world (Ingleton, 2013). Bradberry and Greaves (2012) proposed the core leadership skills of Think, Act, and Assess. This model consisted of three parts, strategy, action, and results, respectively. These core leadership skills laid a solid foundation for effective adaptive leadership. Northouse (2017) proposed core leadership skills in the Primary Leadership Model, which consisted of administrative skills, interpersonal skills, and conceptual skills. The desire to achieve the skills associated with success had a higher correlation with achievement than the desire for success itself (Goldsmith, 2015). However, the domain of skills-building was an essential dimension of leadership education, yet it was surprising that little was contributed to the topic in the leadership literature (Scott, 2018). However, the previous studies were concerned with the importance of skills and specific skills, and there were few discussions with respect to how to develop core leadership skills.

Student Engagement

Not only was student engagement described as participation in educational-related effective practices both inside and outside the classroom, but it also drew significant attention to measuring outcomes. Student engagement was defined as “student involvement in educationally purposed activities” (Hu & Kuh, 2001, p.3). This operational definition (Kuh et al., 2011) stated that student engagement had two main characteristics. The first characteristic was the amount of time and effort students invested in their academic tasks and other education-related activities. The other characteristic of student engagement depended on how the school utilized resources, designed the curriculum, made full use of learning opportunities, and supported services to motivate students to take part in activities that brought about the experiences such as determination, promotion, and graduation. Also, engagement was interpreted as multidimensional, involving aspects of students’ emotions, behavior (participation), and cognition (Fredricks, et al., 2004). Action, purpose, and cross-institutional collaboration were required for engagement and deep learning (Kuh et al., 2007).

Relationship among Leadership Readiness, Core Leadership Skills and Student Engagement

Effective leaders in modern society must not only develop leadership skills, but they must also have a threshold capacity of leadership self-efficacy and motivation to make great efforts to lead their peers and to transform the mastery of skills into effective action. Avolio and Hannah (2008) conducted reviews on heredity and human development and concluded that 70% of leadership capacity was acquired through experience rather than genetic expression. Nevertheless, to some extent, the process of how leaders develop the capability to

lead effectively was associated with the readiness of the individual to engage in developmental experiences (Avolio & Hannah, 2008).

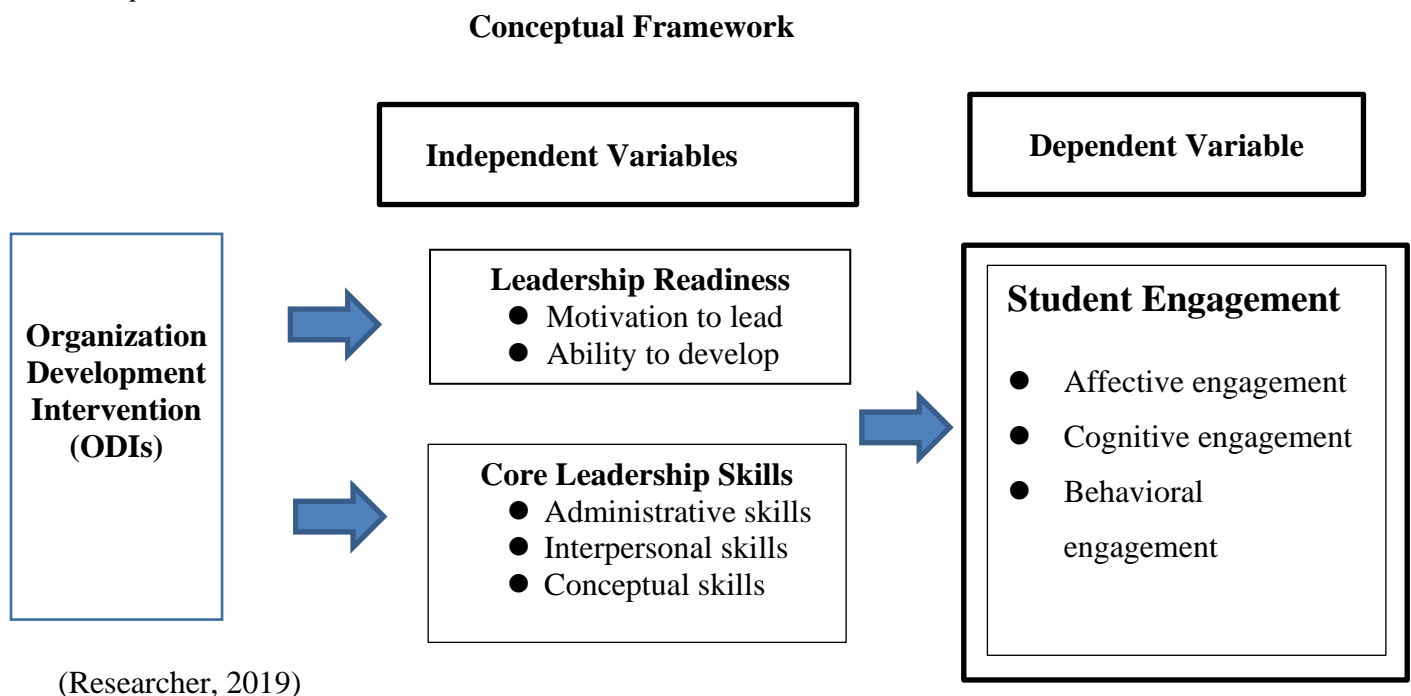
Although being ready to participate was the first requirement for collaborative leadership, the ability to actively engage was mandatory for sustainable development. Without skills, the collaboration brought about hindrances and pessimism (Smith & Piele, 2006). Students participated in extracurricular activities accompanied by job roles, specific tasks, and leading positions. A positive correlation was confirmed by Hernandez (1999) between leadership responsibilities in the organization and skills achievement in terms of interpersonal relations, practical capability, critical thinking, and rational ethical behavior. Scholars advised institutions to prepare students with the skill sets that were necessary to provide good leadership in a dynamic world (Ingleton, 2013).

Conceptual Framework of the Study

This study was designed to examine the overall situation in a private university in Zhejiang Province, the People's Republic of China; and to design practical Organization Development Intervention (ODIs) to develop student leadership readiness, core leadership skills, and to enhance student engagement. It was also designed to determine the differences between the Pre-ODI and Post-ODI regarding leadership readiness, core leadership skills, and student engagement, and to measure the causal relationship among leadership readiness, core leadership skills, and student engagement. The conceptual framework, which is based on the research requirements, is shown in Figure 1.

Figure 1

Conceptual Framework



The two independent variables are student leadership readiness and core leadership skills. Leadership readiness consists of two sub-variables adapted from Avolio & Hannah's Leader Development Readiness Model (2009), i.e. motivation to lead and ability to develop. Core leadership skills as the second independent variable included three sub-variables adapted from Northouse's Primary Leadership Model (2017), i.e. administrative skills, interpersonal skills, and conceptual skills. The dependent variable is student engagement, which is comprised of affective, cognitive, and behavioral engagement based on Kahu & Nelson's (2017) conceptualization regarding student engagement. These variables were identified based on the findings from the preliminary diagnosis, SWOT analysis, and the discourse on the theories and studies.

Methodology

Sample

The population of the private university in China was approximately 17,000 tertiary students, out of which there were 4,385 freshmen. Abiding by the screening questions in the registration form, the researchers only selected freshmen respondents. The reason freshmen were chosen as the respondents was that it was indispensable to teach leadership education and skills to students and youths at an initial stage in terms of student leadership development in modern societies (Oparinde et.al, 2017). Next, another 80 respondents were divided into two groups who participated in the experimental research to compare the differences among those three variables before ODIs and after OD. These two groups were randomly selected by the Random Function in Excel as the researcher was not involved in the respondents' selection. One of the groups was the experimental group (N=40) receiving organization development intervention, and the other was assigned as the comparison group without the intervention.

Instrument

The questionnaires were developed based on the Motivation to Lead (MTL) scale (Chan & Dragow, 2001), Core Leadership Skills (Northouse, 2017), and the Student Engagement Scale (Gunuc & Kuzu, 2014). Some items of the survey were modified for the purpose of fitting the context and the current situation for the study in Zhejiang Province, China. The questionnaire included three parts. The first part consisted of demographic questions: gender, age, college, position in the student union, and experience in extracurricular activities. The second part included questions that were related to each variable: Leadership Readiness, Core Leadership Skills, and Student Engagement. The last part consisted of open questions regarding students' perceptions of the possible relationship between student leadership and student engagement. All the questions on the instrument, aside from demographic questions, used a five-point Likert scale. Below is the interpretation of the scale and level of students' perceptions.

Table 1*Interpretation for the Scale and Level of Student' Perceptions*

Agreement Level	Score	Scale	Interpretation
Strongly Disagree	1	1.00-1.50	Very Low
Disagree	2	1.51-2.50	Low
Neutral	3	2.51-3.50	Moderate
Agree	4	3.51-4.50	High
Strongly Agree	5	4.51-5.00	Very high

Research Instruments and Reliability Test

A mixed methodology was utilized in this research. The data collection started in November 2019 and ended by June 2020. For quantitative data collection, survey questionnaires were conducted using an online survey software called Wenjuanxing. The questionnaires were distributed to all the college students in ZYUFL, Shaoxing City through Wechat. A total of 1,000 questionnaires were gathered through stratified sampling from eight undergraduate colleges to examine the overall situation of student leadership readiness, core leadership skills, and student engagement. Next, for the ODIs experimental analysis, the questionnaires were distributed twice to experimental groups and control groups, namely pretest and posttest, with the purpose of measuring the difference between the entry-level of each group before the ODI and the level of each group after the ODI. For qualitative data, the interview, focus group, and activity observation from five instructors who were observed the students' change in leadership.

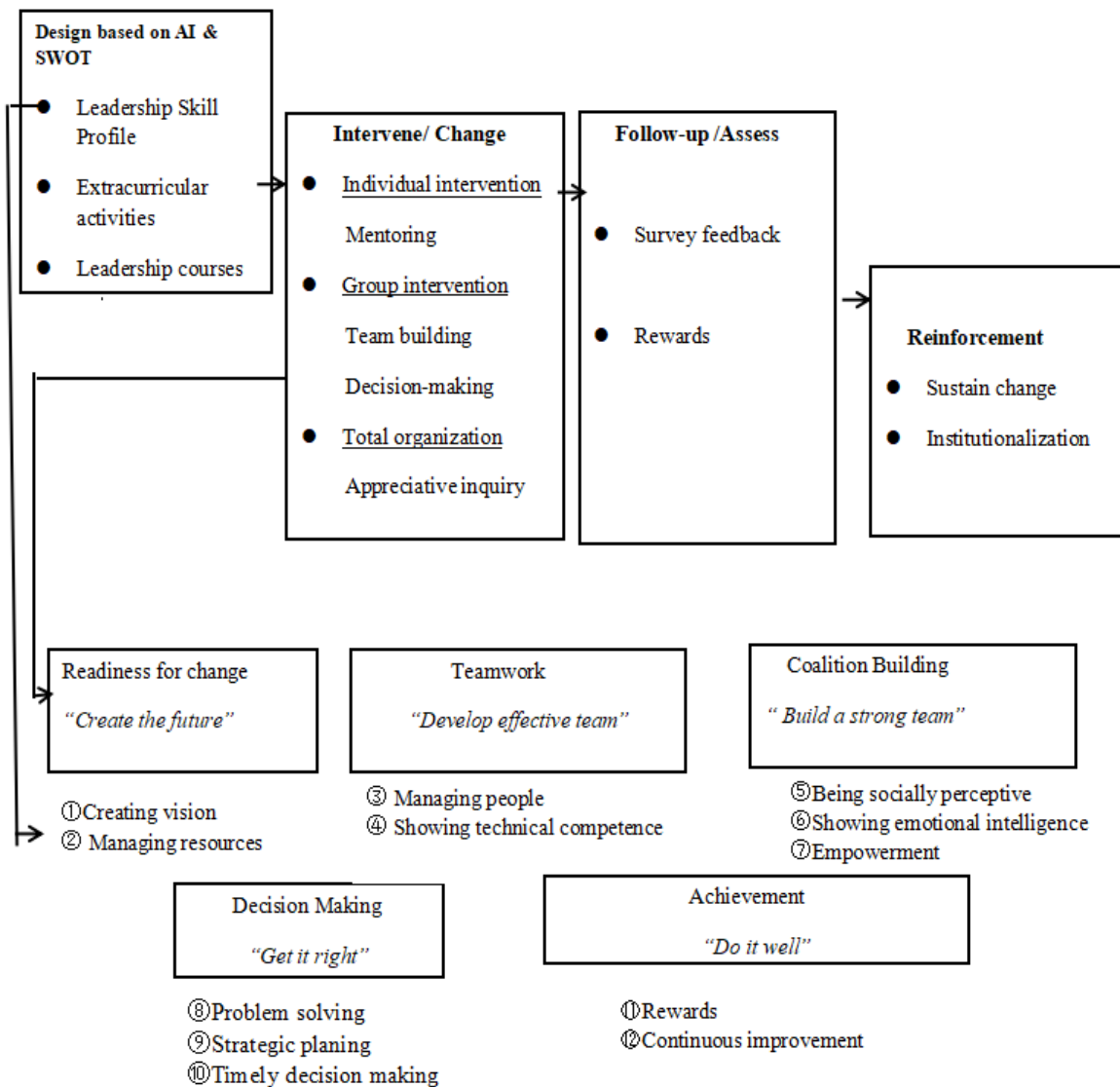
The research instrument was pretested for reliability. It was tested through a pilot study by distributing the questionnaires to 280 college students who studied in a public university in Shaoxing city, which is also in Zhejiang Province, China. The overall value of Cronbach's Alpha for the instrument was .954, which was greater than 0.60, indicating that every question in the research instrument was reliable (Zikmund et al., 2009). For the content analysis, the intra-rater reliability was adopted to ensure the data reliability. The examiner evaluated the codes and themes twice at different periods, with the second finding compared with the first finding only for the determination of inter-rater reliability. The Kendall's Taub correlation coefficients was 0.91, which meant that the finding of the content analysis was reliable.

ODI Process

Pre-ODI Stage. The questionnaires were distributed to 80 college students from the Student Union to measure student leadership readiness, core leadership skills, and student engagement. Using the semi-structural interview outline, in-depth interviews were conducted

with five teachers and ten students from Zhejiang Yuexiu University of Foreign Languages. Secondary data was collected for use in the research study, such as reviewing various documents, pictures, curriculum guides, annual summaries, and videos. Then, the gathered data were analyzed, and the feedback was given to the key stakeholders. The ODIs were expected to be implemented after gaining stakeholders' support.

ODI Stage. Leadership development intervention is designed to bring about planned change in students' leadership readiness and core leadership skills. This is a step-by-step description of the process of delivering the interventions. There are four main stages throughout the whole process (Design-Implement-Assess-Reinforce). This is an iterative cycle to perform the skill-based leadership interventions to best fit students' development. This is a 12-item skillset accompanying the implementation of the intervention. In a different context, particular skills are designed for situational needs. The existing extracurricular activities are drawn on and students are encouraged to take initiative to learn the knowledge about leadership. The interventions are followed by a mutual consensus on the intervention program. The programs consist of five stages: readiness for change; team building, coalition building, decision making, and achievement. In each stage, the leadership skills are the purpose, which is achieved by means of suitable intervention measures. Details of the OD design process are seen in Figure 2.

Figure 2*OD Design Process*

(Researcher, 2019)

Post- ODI Stage . The purpose of the Post ODI stage was to sustain the momentum of change in student organizations. First and foremost, the data of reflective journals were gathered to conduct a qualitative analysis. The researchers provided feedback in the form of a written report to the chairperson of the Student Union and the supervisors in charge of student affairs. Additionally, a support system was established to keep track of the refreezing of the Student Union. OD practitioners stayed in contact with two student advisers and several student leaders as “shadow consultants” to assist them in working out some difficulties and to encourage them to exchange experiences with student representatives from

some other colleges. Moreover, the survey questionnaires were distributed to the respondents in both groups.

Results

Profile of Respondents

During the period of data collection, 1,087 questionnaires were collected through the online software Wenjuanxing, 1,020 of which were filled out by freshmen, and 67 of which were completed by sophomores, juniors, and seniors (see Table 2). As there were 20 invalid questionnaires, the actual number of participants in the study was 1,000. When it came to the question of whether the student had taken a leading role, 491 students had experience in becoming leaders whereas the other 509 students did not have any leadership titles. With regards to the issue of whether the students had attended some lectures on “Leadership”, the majority of students hadn’t attended any leadership lectures, and only 27% of students had attended some lectures of “Leadership”. Next, for the participants in ODI intervention, 92 respondents participated in the questionnaires, randomly selected from the Student Union, and 12 respondents came from other grades. The actual number of the participants was 80, categorized into two groups. Each group had 40 students, randomly distributed in the control group and the experimental group. All of them were freshmen who had been registered as members of the Student Union since October 2019.

Table 2

Profile of Respondents

Are you a freshman?	
Yes	1,000
No	67
Invalid questionnaires	20
Gender	
Male	193
Female	807
Total	1,000
Have you been a student leader in student organizations?	
Yes	491
No	509
Have you attended some lectures on “Leadership”?	
Yes	273
No	727

Research Objective One: To examine the current situation of college student leadership readiness, core leadership skills, and student engagement at private universities in the context of the People's Republic of China

Table 3

Descriptive analysis in the sub-variables under Leadership Readiness, Core Leadership Skills, and Student Engagement

	Descriptive Statistics (N=1000)		Interpretation
	Mean	Std. Deviation	
Motivation to Lead	3.338	.315	Moderate
Ability to Develop	3.477	.389	Moderate
Administrative Skills	3.561	.521	High
Interpersonal Skills	3.792	.547	High
Conceptual Skills	3.449	.598	Moderate
Affective Engagement	3.746	.557	High
Behavior Engagement	3.350	.489	Moderate
Cognitive Engagement	3.475	.617	Moderate

Table 3 illustrates the descriptive analysis in the sub-variables under Leadership Readiness, Core Leadership Skills, and Student Engagement. As for Leadership Readiness, Motivation to Lead and Ability to Develop, they were in the “Moderate” category (M= 3.338, SD=.315; M=3.477, SD=.389). In terms of Core Leadership Skills, the students have had some practices in the “High” degree of Administrative Skills (M= 3.561, SD= .521) and Interpersonal Skills (M=3.792, SD= .547, but they gained the “Moderate” degree of Conceptual Skills (M=3.449, SD= .598)”. When it comes to Student Engagement, Affective Engagement placed at the top in the “High” category (M=3.746, SD=.557). However, Behavior Engagement and Cognitive Engagement were in the “Moderate” category (M=3.350, SD =.489; M=3.475, SD =.617).

Research Objective Two: To design the practical Organization Development Intervention (ODIs) to develop student leadership readiness, core leadership skills, and enhance student engagement.

As for Research Objective Two, content analysis was utilized in analyzing the data from journals, interviews, and focus groups. Content analysis is a systematic, comprehensive, quantitative study of the research data to interpret the essential information and infer accurate meaning from meaningful words and sentences (Neuendorf, 2017). In the process of content analysis, data was sorted into the code, then the themes were generated. The frequency of themes was calculated under leadership readiness, core leadership skills, and organization development intervention affecting both variables.

In response to research Objective Two, the researcher reviewed online and offline

journals and books that demonstrated organization development intervention in leadership readiness and student leadership skills to enhance student engagement in higher education. The articles and e-journals were selected from the year 2010-2020 and were published and indexed by the world's leading academic resources such as Google Scholar, Elsevier's Science Direct, ResearchGate, and so on. Out of 212 journals, the results showed that 17% of the research sources were from 2000-2004, 17% of the sources were from 2005-2009, 23% were from 2010-2014, and 43% were from 2015-2020. The findings of the content analysis was presented, revolving around the themes and sub-themes under (1) leadership readiness (2) core leadership skills, and (3) organization development intervention. The themes of each variable were identified to design the ODI model and are validated with the evidence from the data.

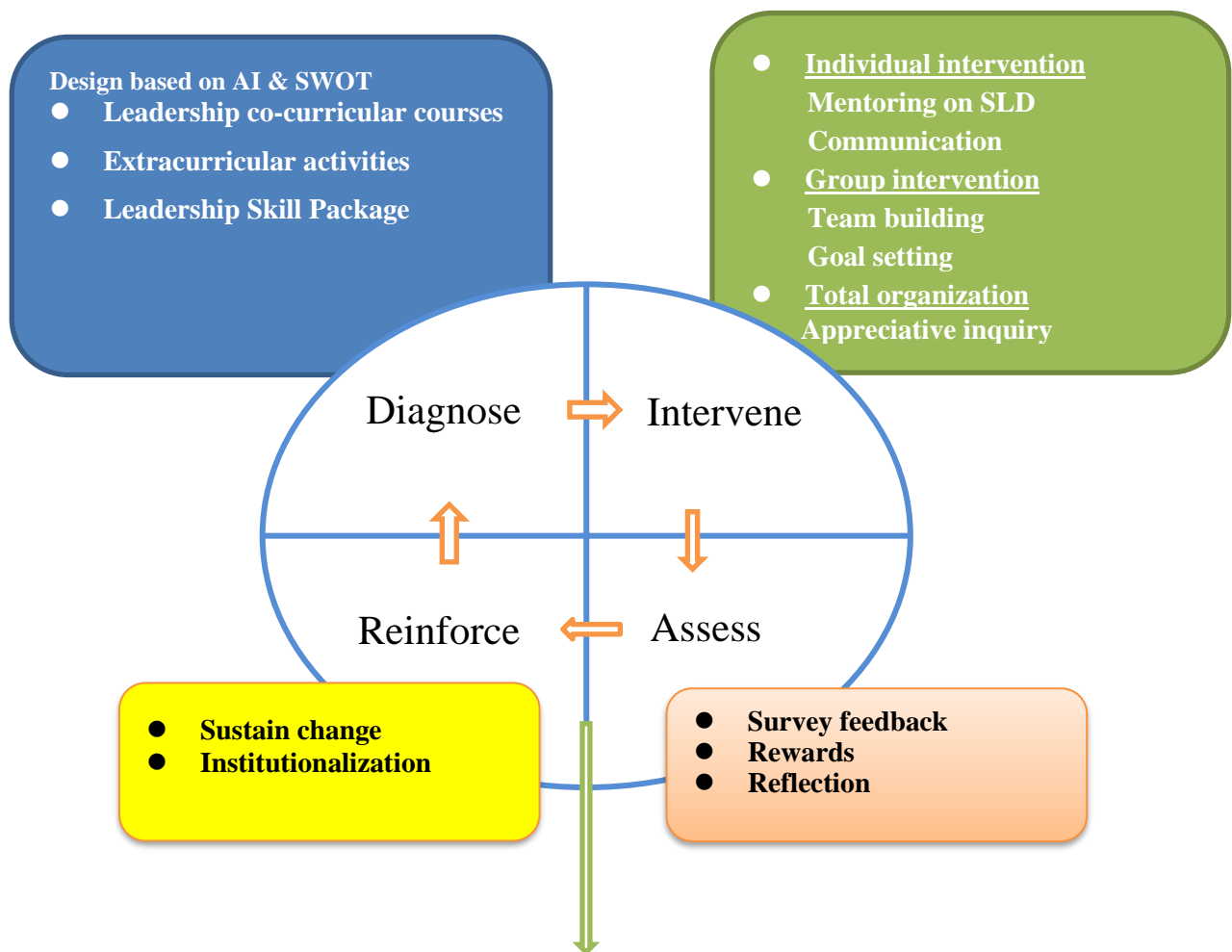
As for leadership readiness, the results of the content analysis revealed that there are three themes under leadership readiness: 1) external factors, like context, 2) intermediate factors, like practice and training, and 3) internal factors, like motivation to lead. 60% of the research sources emphasize the significance of the internal factors. To maintain consistency with the given definition, attention was paid to the four sub-themes under the internal factors: 1) Ability, 2) Motivation to Lead, 3) Interest and Goals, 4) Self-efficacy. Surprisingly, Motivation to Lead accounted for 30% of the internal factor as the highest number, followed by ability. Secondly, out of 120 articles on core leadership skills, the finding of the content analysis shows that four themes emerged under levels of core leadership skills: (1) Administrative Skills, (2) Interpersonal Skills, (3) Conceptual Skills, and (4) Social Skills. The themes with the highest percentage that emerged on Core Leadership Skills were interpersonal skills, and conceptual skills took second place at 39%. By contrast, administrative skills and social skills occupied a relatively small proportion. It is worth mentioning that the first two leading interpersonal skills were communication and teamwork (Lester, 2015, Baird & Parayitam, 2019, Stawiski et al., 2017). Thirdly, ODI can be described as an attempt to apply the management method to student development, especially the aspect of student leadership. Out of 68 articles on the OD intervention for college students' leadership, the content analysis revealed that three themes emerged on ODI: (1) Leadership Knowledge Acquisition in Coursework, (2) Deliberate Practices of OD Intervention, and (3) Pedagogy Intervention. Deliberate Practices of OD intervention ranked in the first place, at 71%. Pedagogy intervention came in second at 18%, (e.g. double-loop learning and action learning). Leadership knowledge acquisition in the classroom was used the least frequently. As for the sub-themes of ODI, there were 12 OD tools, of which mentoring, leadership skill-building, and reflection gained great popularity.

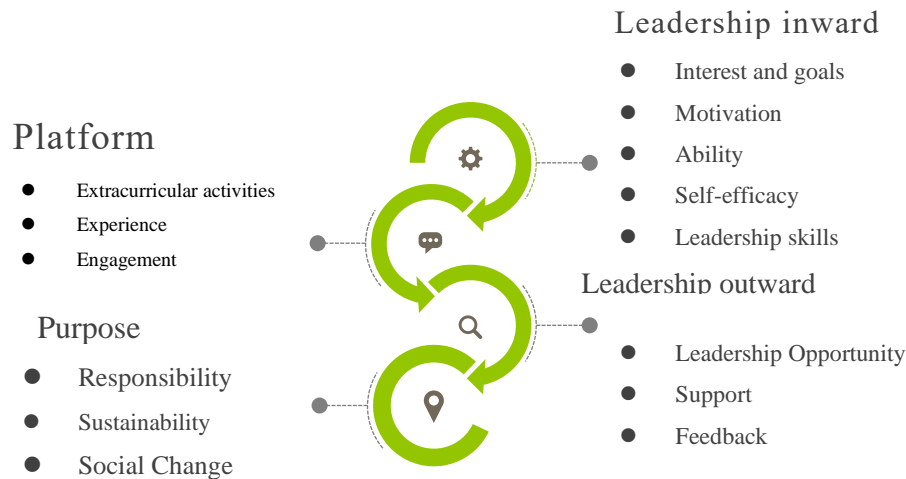
Figure 3 shows the practical ODIs model to develop student leadership readiness and core leadership skills and to enhance student engagement. ODI is an iterate and propulsive sequence of activities that involves four stages, starting from diagnosing the problematic sources, implementing the intervention, assessing the performance after the intervention, ending up with reinforcing the positive change, and forming a set of effective institutionalized management (Cummings & Worley, 2015). The interventions in the student leadership follow those four prescribed steps, but in each stage, there are different emphases.

At the initial stage, SWOT is used to diagnose the current situation of student leadership in the Student Union. The students are prompted to think and share their ideas from a strength-based perspective. Leadership can be cultivated in the form of co-curricular courses and experience in extracurricular activities. In association with school talent cultivation, leadership skill packages are set about to be drawn up. In the next stage, five intervention measures are carefully chosen based on the findings of the content analysis and the interview. Subsequently, it is of great significance to provide feedback with corrective action, together with some stimulative rewards. The heads of the department must reflect on the whole process of intervention and its practical measures. Finally, it is necessary to maintain the sustainable development of the intervention.

Figure 3

OD Intervention Model for Student Leadership Development





(Researcher, 2020)

It is essential to embed the ODI into the leadership development of an individual without their being conscious of the process, which contributes to student engagement. The implementation of Student Leadership Development Intervention requires taking leadership “inward” and leadership “outward” into consideration (Kiersch & Peters, 2017). Leadership inward describes one’s psychological level and personal behavior, such as interests, goal, and leadership skills, while leadership outward refers to creating leadership opportunities, gaining support for the school, and receiving feedback from mentors. The establishment of the platform plays an important role in combining leadership inward with outward by experiencing extracurricular activities and getting engaged in leadership skill-building activities. Those deliberate practices of OD intervention help to develop student leaders who effectively deal with the complicated environment outside.

Research Objective Three: To determine any differences between the Pre-ODI and Post-ODI regarding leadership readiness, core leadership skills, and student engagement.

To test if there was a statistically significant difference in Leadership Readiness and Core Leadership Skills between pre-ODI and Post-ODI, a paired-samples t-test was conducted in both groups.

Table 4

Paired Samples t-test of Leadership Readiness and Core Leadership Skills for the Experimental Group

		Mean	t	df	Sig. (2-tailed)
Pair 1	Motivation to Lead 1	3.288	-7.552	39	.000
	Motivation to Lead 2	3.785			

Pair 2	Ability to Develop 1	3.404	-5.385	39	.000
	Ability to Develop 2	3.838			
Pair 3	Administrative Skills 1	3.900	-1.196	39	.239
	Administrative Skills 2	4.017			
Pair 4	Interpersonal Skills 1	3.705	-8.415	39	.000
	Interpersonal Skills 2	3.775			
Pair 5	Conceptual Skills 1	3.658	-3.312	39	.002
	Conceptual Skills 2	4.067			

Note. 1 = pre-ODI, 2 = post-ODI

Table 4 shows a Paired Samples t-test of Leadership Readiness and Core Leadership Skills for the experimental group. There was a statistically significant difference in Motivation to Lead, Ability to Develop, Interpersonal Skills, and Conceptual Skills between Pre-ODI and Post-ODI since the p -value of the experimental group did pass the threshold of $p < 0.05$ for significance. Therefore, it can be concluded that ODIs contributed to the increase of Leadership Readiness. However, there was no statistical significance in Administrative Skills between Pre-ODI and Post-ODI since the p -value was greater than the 0.05 level for significance.

Table 5

Paired Samples t-test of Leadership Readiness and Core Leadership Skills for the Control Group

		Mean	t	df	Sig. (2-tailed)
Pair 1	Motivation to Lead 1	3.330	-.744	39	.461
	Motivation to Lead 2	3.395			
Pair 2	Ability to Develop 1	3.404	-1.296	39	.202
	Ability to Develop 2	3.542			
Pair 3	Administrative Skills 1	3.758	.113	39	.911
	Administrative Skills 2	3.746			
Pair 4	Interpersonal Skills 1	3.783	.641	39	.526
	Interpersonal Skills 2	3.696			
Pair 5	Conceptual Skills 1	3.550	.153	39	.879
	Conceptual Skills 2	3.529			

Note. 1 = pre-ODI, 2 = post-ODI

Based on the statistics above, there was no statistically significant difference in the five pairs ($p > .05$) for the control group between Pre-ODI and Post-ODI.

Table 6*Paired Sample t-test of Student Engagement for the Experimental Group*

		Mean	t	df	Sig. (2-tailed)
Pair 1	Valuing (Affective Engagement -1) 1	4.475	-.156	39	.877
	Valuing (Affective Engagement -1) 2	4.492			
Pair 2	Sense of Belonging (Affective Engagement-2) 1	3.925	-1.350	39	.185
	Sense of Belonging (Affective Engagement-2) 2	4.100			
Pair 3	Behavior Engagement - I (Extracurricular) 1	3.958	-.385	39	.703
	Behavior Engagement - I (Extracurricular) 2	4.008			
Pair 4	Cognitive Engagement 1	3.800	-2.516	39	.016
	Cognitive Engagement 2	4.075			
Pair 5	Relationships with Faculty Member (Affective Engagement -3) 1	3.683	-3.645	39	.001
	Relationships with Faculty Member (Affective Engagement -3) 2	4.100			

Note. 1 = pre-ODI, 2 = post-ODI

The result of the Paired Sample T-Test in Table 6 illustrates that the mean difference of Valuing, Sense of Belonging and Behavior Engagement did not show a statistically significant difference since Valuing $t(39) = -.156$, $p = .877 > 0.05$ level of significance; Sense of Belonging $t(39) = -1.350$, $p = .185 > 0.05$ level of significance; and Behavior Engagement $t(39) = -.385$, $p = .703 > 0.05$ level of significance. This supported that there was no significant difference in those three scales between the pre-test and post-test. However, the findings of the other two scales showed a significant difference in Cognitive Engagement and Relationship with Faculty Member as Affective Engagement - 3 between the pretest and posttest since the cognitive Engagement ($t(39) = -2.516$, $p = .016$), Affective Engagement - 3 ($t(39) = -3.645$, $p = .001$) did pass the threshold of $p < .05$ for significance.

Table 7*Paired Sample t-test of Student Engagement for the Control Group*

		Mean	t	df	Sig. (2-tailed)
Pair 1	Valuing (Affective Engagement -1)1	4.292	-.109	39	.914
	Valuing (Affective Engagement -1)2	4.308			
Pair 2	Sense of Belonging (Affective Engagement-2) 1	3.717	.234	39	.816
	Sense of Belonging (Affective Engagement-2) 2	3.683			
Pair 3	Behavior Engagement - I (Extracurricular) 1	3.517	-1.285	39	.206
	Behavior Engagement - I (Extracurricular) 2	3.733			
Pair 4	Cognitive Engagement 1	3.650	-.533	39	.597

	Cognitive Engagement 2	3.733			
Pair 5	Relationships with Faculty Member (Affective Engagement -3) 1	3.608	-1.032	39	.308
	Relationships with Faculty Member (Affective Engagement -3) 2	3.775			

Note. 1 = pre-ODI, 2 = post-ODI

Based on the above statistics, there was no statistically significant difference in all the five pairs in the control group ($p > .05$) between Pre-ODI and Post-ODI in student engagement.

Research Objective Four: To measure the causal relationship among leadership readiness, core leadership skills, and student engagement.

Research Objective Four aimed to determine whether there was a causal relationship among leadership readiness, core leadership skills, and student engagement. To address Research Objective Four, multiple regression was performed on the five variables in the current study.

Table 9

ANOVA Result of Regression Analysis of Attributing Factors Impacting Student Engagement

ANOVA					
Model	Sum of Squares	Df	Mean Square	F	Sig.
1. Regression	99.984	5	19.997	108.545	.000 ^b
Residual	183.121	994	.184		
Total	283.105	999			
a. Predictors: (Constant), Leadership readiness (ML,AD); Core leadership skill (AS,IS,CS)					
b. Dependent Variable : SE					

Note. ML (Motivation to Lead), AD (Ability to Develop),
AS (Administrative Skills of Core Leadership Skill),
IS (Interpersonal Skill of Core Leadership Skills),
CS (Conceptual Skills of Core Leadership Skill).

Table 10*Multiple Regression Analysis of Attributing Factors Impacting Student Engagement*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.594 ^a	.353	.350	.42922
a. Predictors: (Constant), Leadership readiness (ML,AD); Core leadership skill (AS,IS,CS)				
b. Dependent Variable : SE				

Table 9 showed the output of the ANOVA analysis and whether there was a statistically significant causal relationship among the three variables. There was statistical significance in the effect of the linear model relationship among the variables since the p -value = .000 < 0.05 level for significance. The predictor variables were motivation to lead, ability to develop, administrative skills, interpersonal skills, and conceptual skills. The dependent variable was student engagement. In Table 10, the coefficient of multiple linear regression was $R^2 = 0.353$. That meant that approximately 35.30 percent of the variation in student engagement was explained by leadership readiness and core leadership skills. The finding of multiple linear regression proved that there was a causal relationship among Leadership Readiness, Core Leadership Skills, and Student Engagement.

Conclusion and Discussion

The research manifests that the respondents reported significant gains in student leadership readiness, student core leadership skills, and student engagement after the implementation of the ODIs. Diagnosing the student leadership, goal setting process, communication with team members, strength-based feedback, student leadership development at extracurricular activities, and mentoring have produced positive results in the participants regarding leadership readiness, core leadership skills, and student engagement. Leadership readiness and core leadership skills are statistically significant in their prediction of student engagement.

This present study attempts to apply the OD intervention to student leadership development, which fills in the gap of the appropriate ODIs in college student leadership. Although there is increasing evidence that structured leadership courses can benefit students, little is known about the best way to implement such interventions (Posner, 2009), and even what students attribute to their learning (Allen & Hartman, 2009). A meta-analysis of over 200 studies found that “leadership interventions produced a 66% probability of achieving a positive outcome” (Avolio et al., 2009, p. 778). The finding of content analysis in the present study showed that those interventions, such as mentoring, skill-building of student leadership, reflection, student leadership development programs that involve real-life experience, and feedback are preferred in the educational context. Some emerging approaches are leaderless

group discussions, simulation training, and 360-degree feedback. Student leadership development does not only encompass skills acquisition, but also involves value-shaping and a sense of mission to promote social change in alignment with the national ideological system and school vision.

Different intervention tools are effectively utilized on the levels of individual, group, and even the student organization. At the individual level, mentoring, feedback, and communication skills are adopted because those establish double cycle learning through face-to-face communication and targeted feedback. At the group level, team activities and team building are used, as well as goal setting, vision-creating, and leadership skills-building training because goal and vision are the direction and motivating power to move forward depending on whether the team is equipped with core leadership skills. The process of participation in extracurricular activities can also be guided by the philosophy “learning by doing”, which gives students opportunities to analyze problems and find the solution to problems by applying theoretical knowledge and looking into the underlying causes of a phenomenon (Kim et al., 2016). Intervening in student leadership brings a positive influence, which was proven by the finding of the Paired Sample T-test. It is worth mentioning that the design of intervention should start from leadership readiness, then proceed to core leadership skills, called Leadership Inside-out. Leadership must be “learned by those who hope to practice it” (Parks, 2005, p. ix).

Recommendations and Implications

OD intervention is an organization-wide planned change with the purpose of increasing organizational performance and effectiveness. For the design of student leadership development, it should relate the basic characteristics of national conditions and talent training objectives of the school. The student affairs administrators should realize that the ODIs for student leadership development and student engagement is not a one-time process; conversely, they are a continuous and ongoing process. To educate future leaders, purposeful leadership intervention should be applied through sensibility infiltration into the extracurricular activities which are supplemented by leadership knowledge acquisition and pedagogy intervention. Most importantly, the priority should be training students’ thinking by means of a double looping learning process, action learning, and experiential learning. As Lu (2015) states, OD itself is a reflective learning process in which the behavior experienced in the process of “single cycle learning” or “double-cycle learning” intervenes. In association with Generation-Z characteristics of technological savviness and over-dependence, some academic courses of leadership knowledge are introduced online as co-curricular courses for those who are interested in the leadership field. Next, an action plan should be well-designed with detailed procedures, feedback, and reflection in response to the external environment in a timely manner.

The research provides some recommendations for the school. The school provides opportunities for the students to exercise leadership skills and establish some arenas between the school and the society. Relying on the existing mechanism by means of student associations, students arrange activities autonomously, which imperceptibly improves their

leadership efficiency.

Limitations

This present paper is limited to a select group of students at a regional private four-year higher education institution situated in southeast China. As a further limitation, the participants are freshmen who have a strong curiosity in university life and exhibit a strong willingness to get engaged in the leadership development program. Most of the respondents were female students, a reality which was determined by the characteristic gender ratio of foreign language schools. The study can be administrated in the university of technology and science with an even gender ratio. The study has more room to expand by examining the differences in the needs for varying levels of leadership skills among other grades of undergraduate students. Additionally, the intervention period lasted for eight months. It would be better to follow-up on the reinforcement and sustainability after the implementation of OD intervention.

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