Research Article

The Learning Potential of Workplace Environment and Civil Servants' Self-Directed Learning Readiness: A Mixed-Method Approach

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The workplace is becoming a site of learning for employees, intending to equip employees with the skills and knowledge demanded by the world of work. This research had the objective of examining the learning potential of Amhara National Regional State regional bureaus' workplace environment and the self-directed learning readiness of civil servants. The researchers used a mixed research approach by collecting data from a population of ($N = 6921$) through questionnaires ($n = 303$), and interviews ($n = 10$). The research found that (1) public sector workplace environments (both technical and sociocultural) have above-average learning potential, except for the presence of a restrictive learning environment technically and poor social capital with the presence of suspension and mistrust among civil servants; (2) sampled civil servants in regional bureaus had average and above self-directed learning readiness. Finally, the researchers forwarded recommendations to stakeholders based on the research findings.

1. Introduction

Globally, the world system is changing. Similarly, the world of work is experiencing rapid and profound changes brought by technological development, demographic changes, globalization, and climate change [1]. Such changes in the workplace require new skills and knowledge to perform the needed job effectively. Today's skills will be obsolete tomorrow (1992), and it is stated that "obsolescence is the enemy: Today's experts can rapidly become uninformed tomorrow" (p. 1). Therefore, the ability to transform rapidly and continuously has become the key to survival in a world of increasing volatility, uncertainty, complexity, and ambiguity [2].

The ever-changing work environment is becoming a common phenomenon in both the public and private sectors. Ineffectiveness in delivering quality services to the public by translating policies into practice is becoming a characteristic of Ethiopian civil service [3]. Government reports also revealed that the ineffectiveness of civil servants in fulfilling the required knowledge, skills, and values [sense of serving the public] is a major cause of this inefficiency in the public sector [4].

Supporting employees to go with changes happening at the workplace is a mechanism to remain competent and productive in the changing world. The global experience shows that it is possible to overcome problems related to skills, knowledge, and attitudes and to run with changes in the workplace; by using Workplace Learning (WPL) as a tool to equip employees with the necessary skills, values, and knowledge to be responsive to changes in the workplace. That is why WPL is becoming an integral part of Human Resource Development (HRD), which encompasses all forms of learning (informal, nonformal, and formal) that occur at work. Formal education students are also taking part in WPL as an intern or apparent ship. Hence, WPL is

not only for working manpower; however, it is also part of the formal education system [5]. Similarly, [6] stated that, in recent years, the term "learning" has begun to be used in many countries by policymakers, practitioners, and some educational researchers in preference to education or training.

To make WPL effective and responsive, it requires a supportive work environment with a high-level Learning Potential of the Workplace (LPW) [5] and highly self-directed employees to learn at the workplace [7]. According to [8], the LPW is the power of the work set to integrate learning at work, resulting in behavioral changes and the generation of new knowledge. As to [9], the learning environment of the workplace consists of both (1) the technical environment that includes the technical conditions that determine conditions for learning, including the laws and procedures of the organization, and (2) the social-cultural environment of the workplace consisting particular social and cultural matters that are important for learning possibilities at the workplace.

The supportiveness of the institutional culture can measure the learning potential of the technical environment to learn by reflection and experimentation, and the social-cultural environment can be measured by employees' opportunity to learn from their colleagues and their supervisors [5]. The social-cultural environment of the workplace is a function of the work environment, social capital, which includes groups and networks that enable people to access resources and collaborate to achieve shared goals [10]. In other words, the supportiveness of the social-cultural environment of the workplace can be measured by the learning opportunity of employees from their colleagues and supervisors.

However, the presence of a supportive work environment to learn alone is not enough for an effective WPL. Civil servants are adults who are responsible for not only their learning, but also the job they are assigned. Therefore, the learning of these adult civil servants goes beyond the transfer of knowledge. As to [11], the education of adult learners must go beyond the transmission of knowledge to helping persons in directing and managing their learning. Again, it is a possible reference to self-directed learning. Adult learning according to Knowles should also include a psychological climate favorable to learning.

Most of the time learning at work emerges informally and in a self-directed manner. Typical workplace learning activities, such as learning from mistakes, self-managed observation, training others, and learning through interaction, are part of Self-Directed Learning (SDL) activities. Because employees emphasized the responsibility of individuals and groups when speaking about their learning [12]. Employees' Self-Directed Learning Readiness (SDLR) can be explained as an activity in which the learner takes the initiative and responsibility for the learning process and plays a significant role in developing and maintaining individual learning in support of the learning organization [13].

However, WPL in the Ethiopian public service sector is an untouched research area. The only research attempted on the WPL of instructors [14] found that instructors prefer more independent learning activities than interactive learning activities, such as discussing, cooperating, and sharing resources with colleagues. Besides this, they found a weak institutional culture in promoting favorable conditions for instructors' learning and regular follow-ups [14]. However, this study focuses on faculty members only by neglecting the administration staff members. The nature of the work environment for instructors is different from the work environment of the administrative civil servants' workplace environment, and the same is expected for workplace learning.

The previous studies did not investigate the extent of the workplace's learning potential. Even the extent of SDLR of instructors was not measured with a standardized scale of measurement to conclude about SDLR of instructors. Rather, they only descript the learning approach preferred by instructors in the case of Bahir Dar University. Furthermore, no research has yet been done in Ethiopia on how different demographic characteristics, such as sex, age, education level, salary level, working department, and work experience, affect the SDLR level of employees.

Other studies conducted on Ethiopian civil service focused on formal learning opportunities and some nonformal and off-the-job training, under the umbrella of HRD, neglecting the informal learning that covers 80% to 90% of the learning that exists at the workplace [15]. Furthermore, the HRD studies were based on the performance paradigm of HRD, viewing learning as a product while studying HRD.

In addition, the researchers of the previous studies on HRD in the Ethiopian public sector come from the field of management. As a result, they view learning from the human capital development perspective. The human capital development perspective of learning stated that learning is a product of scientifically planned training and development activities. This perspective is based on scientific management theory, which has been criticized highly for its short-term focus on profit and treating workers as machine-like forms eventually argued to bring negative performance in the long run [16]. This perspective denied employees the opportunity to take control of their learning and development process and disregarded the influence of context and social capital on the process of learning at the workplace.

The major research gap in Ethiopian public service WPL is the absence of research that focuses on the learning environment of the workplace and employees' learning readiness to learn at the workplace. For example, [17] studied the HRD practice and challenges of the Ethiopian Investment Commission, and they found that training and development programs were ineffective in assessing training needs, setting performance objectives, searching for internal and external training and development aids, planning training strategies, and preparing training schedules and modules, as well as assessing training and development efforts.

However, this research did not consider the impact of the workplace environment and civil servants' learning readiness on the HRD practice of the public sector. Besides, the researcher does not consider the informal learning practices in the workplace. Therefore, filling this research gap is the responsibility of educational researchers and especially those

from the field of adult education. Adult education views WPL as a process of participating in a community of practice. This perspective, learning as a process, includes theories that recognize WPL and performance as embodied phenomena; they are meaningfully shaped by social, organizational, and cultural factors, thereby extending beyond the individual; and they seamlessly integrate a range of human attributes that are much wider than just rationality [18]. Therefore, the researchers became interested in studying WPL from a different perspective: (1) to check the learning potential of public sector work to facilitate learning for civil servants; (2) to investigate the level of civil servants' SDLR to learn at the workplace; (3) to check the presence of significant differences in SDLR of civil servants as a result of sex, age, level of education, level of salary, and working organization. Besides, the researchers were enthusiastic about studying the presence of social capital that can facilitate WPL among civil servants. Therefore, the purpose of this study was to examine the LPW and SDLR of civil servants by collecting primary data through questionnaires and interviews. In general, the research was conducted to answer the following research questions:

(1) How is the learning potential of the workplace to learn: by reflection, by experimentation, from colleagues, and supervisors in Amhara Regional State Bureaus?

(2) To what extent are civil servants self-directed to learn at the workplace?

(i) Is there any difference in learning potential across different regional bureaus?

(ii) Is the learning environment of regional bureaus restrictive or expansive?

(iii) How supportive is the social-cultural environment of the workplace to learn?

(i) Are there differences in self-directed learning readiness of civil servants based on their differences in (a) working institution, (b) sex, (c) age, (d) salary level, (e) work experience, and (f) level of education?

2. Review of Literature

WPL improvement requires appropriate development and implementation of a WPL environment, that is, invitational, tailoring of WPL curriculum to particular enterprise needs, including the readiness of both learners and guides, encouraging participation by both those who are learning and those who are guiding the learning, and appropriate selection and preparation of learning guides [18]. In addition, making WPL effective is the function of the support of learning in the workplace and the readiness of the employee to learn while working. Learning in the workplace occurs in the encounter between the learning environments of the workplace and learning processes [9]. The learning environment can be understood as opportunities for learning contained in the material and social surroundings. Learning environments that offer employees diverse forms of participation foster learning

at work [19]. The workplace environment plays a vibrant role in motivating employees to accomplish their assigned tasks. The learning environment is an organic, holistic concept, an ecosystem that includes the activity and outcomes of the learning [20]. As to Eagle [21], the learning environment encompasses five elements of the workplace environment. The first is the social environment, which encompasses the interaction of employees and commonalities, and the second is the *physical environment*, the place and equipment available in the workplace. The third is an *emotional environment* consisting of the value and confidence they have with colleagues; a cognitive environment is the fourth, including their mental readiness to learn; and the fifth is a holistic environment, which is the presence of a diversity of interests in the elements of a learning environment.

The organizational environment covers only the institutional aspect. However, the individual's position in the workplace and other contextual factors, social relations (social capital), is a prerequisite for effective WPL [22]. Knowles [23] described SDL as a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing, and implementing appropriate learning strategies, and evaluating learning outcomes.

The learning process is critical for the readiness for learning in which the individual and groups meet and exploit the opportunities for learning in learning environments. WPL occurs in a dynamic relation between the employees' learning processes, communities at the workplace, and the enterprise as a technical organizational system [9]. WPL is composed of (1) the technical organizational learning environment (i.e., division of work and work environment, autonomy and application of qualifications, possibilities of social interactions, and strain and stress); (2) the social-cultural environment (i.e., communities, of work, cultural communities, and political communities); (3) and employees learning process (i.e., self-directed learning readiness, work experience, education and training, and social background) [9].

The central aim of this research is to identify the work environment, learning potential, and employees' learning readiness. Work environments have two aspects: the physical environment and the sociocultural environment. In this research, researchers focused on SDLR of civil servants from the employee learning process dimension, the nature of the job in allowing learning by experimentation, and the presence of social interaction (i.e., the expansiveness of the workplace) from the technical, organizational learning environment dimension and the nature of the work environment in creating an opportunity to learn from colleagues, from supervisors inside or outside the organization, and the presence of cross-department (community of practices) experience-sharing from the social-cultural learning environment dimension of WPL.

2.1. Theoretical Lenses. Learning can lead to a shift in knowledge, skills, and attitudes, which can have an impact on work processes and outcomes. Workplace learning can be seen through two lenses: the acquisition paradigm and the

participation paradigm. According to Veronika [24], cognitive skills are acquired at organized events with designated teachers, prescribed curricula, and measurable outcomes in the 'acquisition' paradigm. Learning, on the other hand, is viewed as a relational and dynamic process in which individuals improve their skills and work performance through practice and constant interaction with other people, tools, and materials in the 'participation' and 'construction' paradigms [25].

Similarly, [25] stated that learning is a set of processes that result in changed practices in the lives of individuals. The argument extends to viewing learning from the learner's point of view. There is a tendency to define 'learning' as 'participation in learning activities,' despite the fact that one can participate in a learning program while learning very little of what is being taught [25]. As a result, learning is a process in which the learner engages in various activities and interactions with people, equipment, the social system, and ways of working and living.

The goal of workplace learning can also change depending on the situation. According to Nieuwenhuis and Nijhof [8], there are four different reasons for workplace learning: (1) learning as a means of preparing for work; (2) learning as a tool for increasing productivity and performance; (3) learning for innovation; (4) learning for life. Regardless of the rationale, learning is practiced in the workplace, and it has a similar learning environment. Employees are engaged in various workplace learning practices to achieve all four objectives. To achieve the goal of learning, the potential of the learning environment in the organization should be supportive. The fourth rationale, on the other hand, necessitates employees' self-direction in setting learning objectives. Although workers will frequently adopt goals from previous rationalities because these will frequently be instrumental in their own goals (getting and keeping a job, success status, financial gain), workers may also assess the learning potential of the workplace on its contribution to any personal goals that they may have [8].

Therefore, in this research, researchers view learning as something which is on the side of the learner and a function of participation processes that bring about changed practices in the lives of individuals. Learning is a process of participation in different communities of practice [19, 27–29]. Therefore, SDLR and LPW are major determinants of workplace learning effectiveness. The learning we do on our own may be different from the learning we do in specially constructed learning programs [30].

3. Methods and Materials

This research is conducted in Amhara National Regional State (ANRS) bureaus. ANRS is among the regional states of Ethiopia, which is the second-most populous state after Oromia. Bahir Dar is its capital. And the official language of the region is Amharic. It is estimated to have about 21,844,011 population throughout the state (http://www.statsethiopia.gov.et/). The regional state has 36,125 civil servants at all levels of administration in the regional state.

At the regional level, 6921 civil servants are working. The study participants were selected from the regional level civil servants, working at the highest administrative level in the state.

Researchers conducted this research based on the pragmatic paradigm, which is concerned with applications—what works—and solutions to problems [31]. The focus of the research is examining civil servants' WPL in ANRS public sector organizations, to know the learning potential of the workplace, its' supportiveness to learn, and civil servants' SDLR to learn. To achieve these objectives, the researchers follow a mixed research approach. This approach is important to integrate quantitative and qualitative data to support quantitative data with qualitative data and vice versa [31].

A parallel convergent research design that helps collect both quantitative and qualitative data simultaneously was the design selected for this research. A basic rationale for this design is that (1) the data collection form supplies strengths to offset the weaknesses of the other form, and (2) a more complete understanding of the research problem results from collecting both quantitative and qualitative data [32]. The quantitative data helps measure the LPW and SDLR of civil servants. The qualitative data helps answer the questions regarding the supportiveness of the physical environment of the workplace and understand the nature of the social environment regarding its expansiveness and restrictiveness.

3.1. Participants. The researchers selected sample participants from civil servants working in ten regional bureaus. The population of the study consists of 6921 civil servants (4463 males and 2458 females) working at 48 regional level institutions in ANRS. The sample size for the quantitative data is determined by Yamane's formula, which states that the sample size $(n) = (N/(1 + N(\alpha)^2))$, where, n = sample size, N = total population, and α = the expected sampling error [33]. For this research, the total population = 6921 and $\alpha = 0.05$ (commonly used level of precision for social science research). Therefore, the sample size for the research $(n) = (6921/(1 + 6921(0.05)^2)) = (6921/18.3) = 378$.

The sampling techniques used were multistage cluster sampling. According to Babbie [34], cluster sampling is a multistage sampling in which natural groups (clusters) are sampled initially, with the members of each selected group being subsampled afterwards. The researchers used different sampling techniques at different stages. To select these research participants, the researchers initially select ten institutions (cluster samples) from 48 regional institutions based on simple random sampling. After that, researchers assigned a quota for each selected cluster based on the percentage share they have from the total population (see Table 1). After assigning quota for each cluster, convenient sampling becomes a feasible strategy to select voluntary participants who were allowed to work in their office at the time of COVID-19.

As depicted in Table 1, the valid number of the questionnaire used for data analysis was 303 with a response rate of 80.16% from a total of 378 samples. Ten interviewees were purposively selected from four institutions (i.e., 2 from the Education Bureau, 4 from Civil Service Commission, 2 from

TABLE 1: Population, sample cluster sample size, and response rate.

| Bureaus | Research population | Assigned quota | Returned | | | Response rate |
			Valid	Invalid	Total	
Education bureau	218	41	30	6	36	73.17%
Road and transport bureau	168	31	30	1	31	96.77&
Supreme court	278	51	30	10	40	58.82%
Health bureau	215	39	30	2	32	76.92%
Trade bureau	175	32	30	0	30	93.75%
Urban development bureau	183	34	30	4	34	88.24%
TVET development bureau	180	33	31	0	31	93.94%
Agriculture bureau	220	40	32	1	33	80%
Revenues bureau	165	30	30	0	30	100%
Water resource development bureau	256	47	30	6	36	63.83%
Total	2058	378	303	30	333	80.16%

Source: ANRS Employee Statistics (2019) and Survey Data. Note: the researchers rejected questionnaires that were not properly filled (commonly called outliers) and these questionnaires were counted as invalid from returned questionnaires.

Supreme Courthouse, and 2 from Trade and Market Development Bureau) to collect qualitative data. A purposive sampling technique helps the research team get key informants. The key informants for the intended research were HRD officers from each bureau, middle-level managers, and, especially, experts from the Civil Service Commission, who supported each regional bureau to build the capacity of their employees and provide quality services for the public.

3.2. Methods of Data Collection. Data were collected through questionnaires and semistructured interviews. The questionnaire was made up of both closed-ended and open items. Closed-ended items were composed of two scales. The first scale is about the learning potential of the workplace (LPW), developed by (2014) to measure the LPW, and has 12 items in four dimensions (i.e., learning by reflection, learning by experimentation, learning from colleagues, and learning from supervisors). The second scale was prepared by De Bruin and De Bruin [7] to measure learners' self-directed learning readiness (SDLR) in the workplace. This part of the questionnaire was used to answer the basic question about learners' self-directedness at the workplace having 13 items in total. Both scales have five rating scales (ranging from 1 = strongly disagree to 5 = strongly agree). The open-ended questions were like the interview questions to collect supportive data for the interview.

Interview questions were organized to obtain information about the nature of the work environment, the supportiveness of the work environment to learn, and its restrictiveness and expansiveness. It helps collect information about informal WPL, which is unrecorded and undocumented. The researchers prepared open-ended questions that can provoke ideas and expand the interview depending on the response of the respondent.

Before starting data collection, researchers checked the reliability and validity of the items prepared for data collection. The reliability of the adopted scales reported by the respective authors depicted that the scales have a very good level of reliability. To check the items, reliability in the context area pilot testing was conducted by collecting data from 30 civil servants working in different departments of Bahir Dar City, who were convenient at the workplace. The reliability of the data obtained from the pilot test was checked by the Cronbach Alpha measure of reliability, to check the reliability of items. The reliability test result is presented in Table 2.

To check the validity of open-ended items and multiple-choice items, the researchers sought comments from colleagues to make corrections. After translating the questionnaire into Amharic, the researchers received comments from language experts from the Department of Ethiopian Language and Literature, Bahir Dar University, and made revisions based on the comments given.

The data collection process takes six weeks. Researchers begin data collection by disseminating questionnaires. While disseminating and collecting questionnaires, the research team built a rapport with the sample civil servants for interview data collection. At the end of the survey data collection, the interview was conducted by the researchers together.

The data analysis process started with the verification of the questionnaires and coding. Each questionnaire paper was coded and numbered according to the name of the institution it was collected from and the order of return (like Edu_1, Edu_2, Court_1, Court_2, etc.). The next step was encoding the quantitative data into the SPSS-24 statistical tool. The research data has been presented based on the sequence of research questions. As to Creswell [31], the side-by-side comparison is an approach to data analysis in a convergent parallel research design in which the researchers will first report the quantitative statistical results and then discuss the qualitative finding's themes that either confirm or disconfirm the statistical results.

Three major statistical tests were used to analyze the quantitative data, namely, one-way ANOVA, one-sample t-test, and independent-sample t-test. One-way ANOVA was appropriate in any experiment in which the scores can be used to form two independent estimates of the population variance, within the group and between-group variance [35]. The learning potential of regnal bureaus can form variance within each sector and variance among sectors. Similarly, the SDLR of civil servants in regional bureaus were checked across civil servants with (1) different age

TABLE 2: Reliability of the scales used to collect research data.

Scale type	Dimension	Reliability results in Cronbach alpha		
		Reported	Pilot test	Actual data
LPW	Learning by reflection	0.91	0.81	0.81
	Learning by experimentation	0.90	0.79	0.77
	Learning from colleagues	0.83	0.85	0.85
	Learning from supervisors	0.90	0.87	0.87
SDLR		0.93	0.95	0.95

Sources: Nikolova et al. [5]; De Bruin and De Bruin [7]; pilot test data, and actual research data.

groups, (2) different levels of education, (3) different ranges of salary, (4) different levels of work experience, and (difference in the working institution); and it was also appropriate to use one-way ANOVA.

One sample *t*-test was also an appropriate tool to check the difference between a score that is previously known and the new computed score [35]. For this research, a one-sample *t*-test was employed to check the presence of a statistically significant difference between the middle point of the measurement scale [expected mean; ($M = 3$) in case of 5-point scale] and the actual mean (computed mean) score of the learning potential of the workplace.

The other analysis requiring a statistical test is to check the difference in SDLR between male and female civil servants. To check the variance between two independent groups, it was appropriate to use an independent sample *t*-test. The *t*-test is relatively insensitive to violations of normality and homogeneity of variance, depending on the sample size and the type and magnitude of the violation [35].

Qualitative data analyses were started by creating themes of data analysis themes based on the research question. The first theme was the supportiveness of the physical work environment, and the second theme was the supportiveness of the sociocultural work environment having two subthemes (i.e., expansiveness and restrictiveness of the working culture of the organization).

3.3. Ethical Issues. The researchers secured ethical clearance from the concerned body at Bahir Dar University, College of Education and Behavioural Science, and held a support letter to show to respondents in the data collection process. Participation in the investigation was based on the will of the respondents, and voice recording was carried out with the informed consent of the interviewees.

Furthermore, the researchers had no conflict of interest related to the research. Participation in this study was voluntary. The researchers maintain the anonymity and confidentiality of the respondents' personal information, and the issue of anonymity and the purpose of the study are clearly stated on the cover of the questionnaire. The names used in the research report were pseudonames to keep the confidentiality of the respondent's personal information.

4. Result

4.1. The Learning Potential of the Workplace (LPW). As stated earlier in the review section, the learning potential of the workplace can be quantitatively measured by taking the mean score of the institutions' supportiveness to learn through reflection through experimentation from colleagues and supervisors. Researchers tried to check the extent of LPW by conducting a one-sample *t*-test by taking the expected mean of the scale and the mean score of each institution's learning potential. To check the presence of a statistically significant difference between the expected mean ($M = 9$, which is the sum of the midpoint (i.e., 3) of all three questions in each dimension) and the sum of the scores of the regional bureau LPW in four dimensions, a one-sample *t*-test was conducted. The rating questionnaire has a 5-point scale, and three (3) is the middle point that can serve as a point of reference; that is to say, it is below the middle point or above the middle point. Since the average score of two items having two extreme values (i.e., 1 and 5) is 3, the researchers want to analyze the sum of scores, and the middle point for some of the scores for three items in each dimension is 9 (3 items in each dimension * middle point $3 = 9$).

The one-sample *t*-test result presented in Table 3 indicates that there is a statistically significant difference between the observed mean of '*learning by reflection dimension*' ($M = 10.94$, SD = 2.63) and the expected mean ($M = 9$) with a mean difference of 1.944 (condition, *t* (12.875), df(302), $p < 0.01$). The observed mean of '*learning by experimentation dimension*' ($M = 10.25$, SD = 2.85) is also greater than the expected mean ($M = 9$), and the mean difference (1.248) is statistically significant (condition, *t*(7.623), df(302), $p = 24$). Moreover, to check the presence of a statistically significant mean difference in the LPW (in all four dimensions), among the selected regional bureaus, the *F*-test was computed, and the result is presented in Table 4.

The *F*-test results presented in Table 4 reveal that there is no statistically significant difference among the 10 regional bureaus in all dimensions of learning: (i) *learning by reflection dimension* at ($F = (9/293) = 1.42$; $P = 0.25$); (ii) *learning by experimentation dimension* at ($F = 9/293) = 0.91$; $P = 0.52$); (iii) *learning from colleagues dimension* at ($F = (9/293) = 1.61$; $P = 0.11$); and (iv) *learning from supervisors* at ($F = (9/293) = 1.28$; $P = 0.25$) with 95% confidence interval.

Moreover, the data obtained from open-ended items regarding the LPW also confirm the presence of a high potential for learning in regional bureaus. Furthermore, the

Table 3: One-sample *t*-test result of LPW in four dimensions.

WPL dimension	M	SD	t (302)	Mean difference	95% CI of the difference	
					Lower	Upper
By reflection	10.94	2.63	12.88**	1.94	1.65	2.24
By experimentation	10.25	2.849	7.62**	1.25	0.93	1.57
From colleagues	11.32	2.88	14.04**	2.32	2.00	2.65
From supervisors	10.49	3.19	8.14**	1.49	1.13	1.85

Note that the test value was 9; ** $p < 0.01$, two-tailed; $n = 303$. Source: Analysis of Survey Data.

Table 4: ANOVA table shows a comparison result of the LPW.

Learning dimension		SS	Df	MS	F	P
Learning by reflection	Between groups	87.337	9	9.70	1.42	0.18
	Within groups	1998.710	293	6.82		
	Total	2086.046	302			
Learning by experimentation	Between groups	66.646	9	7.41	0.91	0.52
	Within groups	2383.790	293	8.14		
	Total	2450.436	302			
Learning from colleagues	Between groups	118.011	9	13.11	1.61	0.11
	Within groups	2388.292	293	8.15		
	Total	2506.304	302			
Learning from supervisors	Between groups	116.572	9	12.95	1.28	0.25
	Within groups	2955.157	293	10.09		
	Total	3071.729	302			

Source: Analysis of Survey Data.

data obtained from the interview shows that most of the regional bureaus (Education Bureau, Agriculture Bureau, Trade and Market Development Bureau, TVE Development Bureau, Supreme Courthouse, Civil Service Commission, Water Resource Development Bureau, Road and Transport Bureau, and Health Bureau) have libraries equipped with books and furniture.

4.1.1. The Nature of Technical Work Environment of Regional Bureaus. The interviewees were asked about the nature of their work environment, its openness to all, and its restrictiveness. Interviewees affirm that the nature of the work environment in most bureaus is restrictive to the department of civil servants they belong to. Civil servants can learn from colleagues in the same job department. In supporting this argument, Mr. Dagnnet stated that:

Monthly learning and development programs in our directorate are department-based, and we have no opportunity to learn about issues related to other departments. Civil servants in our directorate share everything daily. However, civil servants from other directorates did not have information about our department.

Similarly, Mr. Genzebu, from Trade and Market Development Bureau, stated that his learning and information-sharing experience is limited to the directorate to which he belongs; and he did not have a chance to communicate with civil servants outside of his department unless there is a meeting for the entire civil servants for prespecified agenda. It implies that the learning opportunity of civil servants is restricted to the skills and knowledge required by their job department, and they have no chance to learn the skills and knowledge needed by other job departments.

Most of the interviewees stated that civil servants did not have a chance to cross-directorate and cross-organizational learning practices. Moreover, an interviewee from the Civil Service Commission states that:

Civil servants are working on their jobs in isolation, and there is no cross-department or cross-organizational support among civil servants. Moreover, civil servants have no chance to participate in more than one department at a time to have multidimensional knowledge and skills.

The interviewees also stated that informal learning is not getting appropriate credit from the management as well as from the organization's working culture; instead, managers and civil servants value more formal education systems and learning from educational institutions. However, one interviewee from the Supreme Court stated an expansive working culture in the institution. Even job rotation of judges from one department to another is common.

Similarly, most interviewees stated that the regional bureaus have a supportive technical environment to learn, which is equipped with Internet access and library services. Moreover, the interviewees affirmed that the presence of experienced civil servants is an excellent opportunity to learn in the workplace. For example, Mr. Adege, a director at Education Bureau, explains the supportiveness of his workplace to learning by saying:

"The work environment in our bureau [Education Bureau] supports learning for those who have an interest and commitment to learning. Everyone can learn at their pace as most workers have access to a well-furnished office, personal computers with internet access, printed books in the library, semi-annually and annually published

magazines, weekly published newspapers, and broachers about different issues concerning the mission and vision of our bureau. What matters is the interest of civil servants to learn"

Similarly, Mr. Dagnnet stated that no substantial challenge hinders workers from learning in their workplace. He said:

"As a judge, I am learning from each case, I deal with different cases every day. To make sound decisions, I have to articulate the subject from different dimensions by reading proclamations, penalty codes, directives, and other materials related to the case. In doing so, I am doing my job and learning from my reading of the documents mentioned above"

4.1.2. Supportiveness of Workplace Sociocultural Environment. The interviewees also stated that there is a problem in terms of the social-cultural environment of the workplace. They assured the presence of mutual suspicion between civil servants who are members of the ruling party and those who are not. Such doubts among them also affect the open communication among civil servants to learn from each other. Moreover, the interviewees affirmed that suspicion affects open communication among civil servants to learn from each other. This argument is against the findings obtained from quantitative data, which states that regional bureaus have above-average LPW in learning from colleagues' dimensions and learning from supervisors' dimensions.

Moreover, the work environment of the public sector workplace was found problematic in creating social capital among civil servants and bringing the "we" feeling. One interviewee from Education Bureau stated that "*we come to the office to accomplish tasks and return home at the end. We have no sense of belongingness to the institution, and we have no feeling of we employees of the education bureau.*"

Another interviewee from Trade and Market Development Bureau stated that "the only critical issue as an employee of this bureau is working together in the same office room. We have no dependable social grouping in our bureau; even some of us do not know each other." The presence of such poor social capital restricts information sharing and collective learning informally through experience sharing. Furthermore, it restricts the transfer of knowledge among civil servants.

4.2. Civil Servants' SDLR to Learn at the Workplace. Civil servants with a high level of SDLR become responsible for their learning at the workplace [36]. Therefore, knowing the status of civil servants' SDLR is vital for planning an effective WPL program. Cognizant of this, the researchers examined the SDLR of civil servants by using a measurement scale having 13 items.

The researchers have conducted a one-sample t-test to check the presence of a statistically significant difference between the expected mean ($M = 3$) and the actual mean of

civil servants perceived SDLR who are working in ten different bureaus. The result of the single sample t-test result reveals that total civil servants' average SDLR score is higher than the middle point of the scale (3) with a statistically significant level at ($M = 3.85$, SD = .87, $t(302) = 16.91$, $P < 0.01$). However, SDLR of civil servants working in Agriculture bureau has no statistically significance difference with the expected mean ($M = 3$) at ($M = 3.24$, SD = 1.12, $t(31) = 1.20$, $p = 24$). It implies that civil servants working in the Agriculture Bureau have an average level of SDLR, and other civil servants working in the remaining regional bureaus have above-average SDLR scores.

Moreover, the researchers conducted a one-way ANOVA (F-test) to check the presence of a statistically significant difference in SDLR of civil servants depending on the regional bureau they are working in, age range, salary range, work experience, and level of education. The F-test results indicated in Table 5 reveale that at least one of the groups' mean SDLR of civil servants is significantly different from the others, with $F(9, 293) = 2.73$, $P < 0.01$ depending on the working institution in which civil servants are working. However, there is no statistically significant difference in SDLR of civil servants as a result of age [with $F(3/296) = 0.42$, $P = 0.74$], salary [with $F(5/293) = 1.87$, $P = 0.10$], work experience $F(3/298) = 0.89$, $P = 0.45$], and level of education [with $F(3/299) = 1.47$, $P = 0.22$].

To verify which pair of means significantly differed, conducting a post hoc test was compulsory for the factor having a statistically significant effect (i.e., working institutions) on the SDLR of civil servants. The post hoc comparison conducted by Tukey's HSD test revealed that the average SDLR of civil servants working in Agriculture Bureau ($M = 3.24$, SD = 1.12) was lower than their counterparts working in (a) Education Bureau ($M = 4.04$, SD = 0.65, $P = 0.009$); (b) Supreme Court ($M = 4.03$, SD = 0.62, $P = 0.012$; (c) Health Bureau ($M = 3.96$, SD = 0.91, $P = 0.34$); (d) Urban Development, Housing and Construction Bureau ($M = 4.02$, SD = 0.77, $P = 0.12$); and (*e*) Water, Irrigation and Energy Development Bureau ($M = 4.04$, SD = 0.76, $P = 0.01$) in statistically significant level with 95% confidence interval. However, there is no statistically significant difference between other possible pairs of organizations in the mean score of civil servants' SDLR score.

Moreover, the researchers wanted to check the effect of being female or male on the SDLR of civil servants working in regional bureaus. The independent t-test result computed to check the effect of sex on the SDLR of civil servants to learn at the workplace is presented in Table 6.

The independent sample t-test test result presented in Table 6 depicts that there is no statistically significant difference between the SDLR of females ($M = 3.92$, SD = .70) and males ($M = 3.81$, SD = 0.95), civil servants with $t(295.35) = -1.15$, $P = 0.25$. It implies that male and female civil servants have a relatively similar level of self-directedness to learn at the workplace.

5. Discussion

In this section, the researchers tried to check the consistency of the findings with previous research reports. The

TABLE 5: ANOVA table of civil servants' SDLR scores across organizations.

Factor	Mean of SDLR scores	SS	Df	MS	F	P
Working organization	Between groups	17.82	9	1.98	2.73	0.005*
	Within groups	212.70	293	0.73		
	Total	230.52	302			
Age	Between groups	0.97	3	0.32	0.42	0.74
	Within groups	227.76	296	0.77		
	Total	228.73	299			
Salary	Between groups	7.14	5	1.43	1.90	0.09
	Within groups	222.67	296	0.75		
	Total	229.81	301			
Work experience	Between groups	2.05	3	0.68	0.89	0.45
	Within groups	228.46	298	0.77		
	Total	230.50	301			
Education level	Between groups	3.35	3	1.12	1.47	0.22
	Within groups	227.18	299	0.76		
	Total	230.52	302			

Source: analysis of survey data.

TABLE 6: t-test results for SDLR between male and female civil servants.

Group	N	M	SD	95% CI for mean difference		Mean difference	T	Df	P
				Lower	Upper				
Male	200	3.81	0.95	−0.30	0.08	−0.11	−1.15	259.35	0.25
Female	101	3.92	0.70						

Note: Leven's test for equality of variance indicates $P = 0.001$, and the test did not assume equality of variance. Source: analysis of survey data.

discussion is conducted thematically based on the research questions to make the discussion more straightforward for the readers.

5.1. Learning Potential of the Workplace Environment.

As stated in the introductory part of this paper, learning occurs in a dynamic relation between the employees' learning processes, the community at the workplace, and the enterprise as a technical organizational system [9]. Therefore, the workplace's technical environment and sociocultural environment impact the effectiveness of learning at the workplace.

5.1.1. Technical Environment of the Workplace.

Regarding the learning potential of the workplace in terms of the technical environment, this research has found that civil servants working in ANRS regional bureaus have an excellent opportunity to learn *(1) by reflection* and *(2) through experimentation*. The technical environment is a technological condition that determines the requirements for learning [9]. However, it is also found that the regional bureaus have a restrictive working culture technically.

Civil servants did not interact with other civil servants beyond their job departments or organization. Moreover, there is no culture of job rotation among civil servants in the region; instead, they expect to specialize in their position. The only way to change the directorate is to have a job promotion or transfer to another position not filled by other employees. This is guaranteed by proclamation 171/2002 of

the civil servants' administration proclamation [37]. This finding is in line with the finding of Gugssa and Kabeta [14], which revealed that the institution's condition is found to be overwhelmingly poor in recognizing staff for taking any initiative, giving them the freedom to use different resources to accomplish their tasks, helping instructors to balance their work and family-related matters. Such a restrictive WPL environment loses the opportunity to increase effective learning potential and the likelihood that more employees can avail themselves of the available opportunities [38].

Even though the importance of learning from and through experience has long been recognized in adult and vocational education circles [6], the public sector work environment was found less effective in accrediting learning from and through experience in the public sector workplaces. Not only managers who devalue informal workplace learning, but also civil servants did not value it. This situation may hamper the effectiveness of WPL in every scenario. Giving credit and credentials to students who engaged in placement at the workplace is common [39]. Therefore, the absence of appropriate accreditation systems for learning practices at the workplace is a contributing factor to the unsupportive learning environment in the workplace.

5.1.2. The Social-Cultural Environment of the Workplace.

Regarding the learning potential of the social-cultural environment, the survey data revealed that civil servants have above-average learning potential in the workplace to learn *from colleagues* and *supervisors* at the workplace, similar to

the technical environment. However, the data obtained from the interview did not confirm this result even though the interviewees agreed with the survey respondents' response to the presence of a supportive technical environment. The interviewees have also argued that the social-cultural environment of the workplace is not supportive to learn in the presence of mutual suspicion and distrust among colleagues and supervisors. This finding is consistent with the finding of Gugssa and Kabeta [14], which revealed that most people do not like to ask others and do not want to show their incompetence on some issues, and they assume that learning by asking colleagues is a shameful act. The ineffectiveness of the social environment in facilitating learning will strongly affect the effectiveness of workplace learning. The informal networks are manifested in spontaneous, casual, and unregulated exchanges of information and resources within communities and efforts at cooperation, coordination, and mutual assistance that help maximize the utilization of available resources [10].

5.2. Self-Directed Learning Readiness of Civil Servants to Learn at the Workplace. This research founds a statistically significant difference in the SDLR of civil servants depending on the institution they are working in. Civil servants working in the Agriculture Bureau have SDLR, which is significantly lower than that of those working in Education Bureau, Supreme Court, Health Bureau, Urban Development, Housing, Construction Bureau, and Water, Irrigation, and Energy Development Bureau. This finding is compatible with the finding of [40], which states that employees exercising autonomy, competence, and social integration will have better self-directedness to learn at the workplace than their counterparts. Similarly, Park and Kwon [41] found that employees in different organizations had different levels of self-directed learning readiness. Moreover, the nature of the task performed in a job is most likely to affect the development of meta-cognitive skills and exposure to self-directed learning [42]. This implies that the SDLR of employees depends on the type of profession they have.

The finding of this research about the SDLR difference between male and female civil servants is against the result of [43, 44], which states that there is a statistically significant difference in self-directed learning readiness to learn between male and female students, in which females are highly self-directed for learning than males. However, it is compatible with the study of [45], which found that there is no significant difference in SDLR among preprimary school-teachers due to gender.

The result of the research about the difference in SDLR of civil servants in different age groups is incompatible with that of the oldest studies conducted about the impact of age on SDLR. [46] found that older university students score higher SDLR than youngers. Similarly, Raemdonck et al., [42] found that middle-aged employees are more self-directed than the oldest and youngest employees, in which the youngest employees lack experience, and the oldest employees have no motivating carrier development. However, the current research finding is compatible with [45] findings,

which revealed no significant difference in self-directed learning between teachers in terms of their age. Similarly, the result of this research about the impact of the salary range is compatible with the finding of Tekko and Demirel [44] that state that there is no significant difference existed between self-directed learning skills of students by the level of income.

The finding regarding the difference in SDLR depending on the level of work experience is incompatible with the argument of [42], which states that employees with higher levels of work experience have higher SDLR scores than employees with no or little work experience. However, it is compatible with Torabi et al.'s (2013) finding that there is no statistically significant difference in SDLR across teachers with different work experiences. Similarly, the result of this research about the impact of education on SDLR is compatible with the finding of [45] that revealed that there is no difference in the SDLR score of teachers across their levels of education.

6. Conclusion

Based on the findings of the research and the discussions presented above, the s come to the following conclusions:

(i) Except for the presence of a restrictive learning environment, the technical background of the workplace was found to have above-average learning potential to learn by reflection and experimentation, having Internet access, a library, and personal computers for each expert.

(ii) Even though the survey data revealed that the workplace has above-average learning potential to learn from colleagues and supervisors, the interviewees affirmed that the social-cultural environment of the workplace found a significant constraint on LPW effectiveness with the presence of poor social capital, high mutual suspicion, and mistrust among civil servants.

(iii) ANRS bureau workplace environment has above-average LPW, and there is no statistically significant difference among the ten regional bureaus in all dimensions (learning by reflection, experimentation, learning from colleagues, and learning from supervisors) with 95% confidence.

(iv) SDLR of civil servants is above average in all regional bureaus except for civil servants in Agriculture Bureaus, who have only the average SDLR level. And it implies that the difference in the profession has a statistically significant effect on the SDLR of civil servants.

(v) Demographic characteristics of civil servants (sex, age, work experience, salary, and level of education) have no statistically significant effect on the SDLR of civil servants; rather, the differences in the profession (like agricultural experts, education experts, and health experts) have a statistically significant effect on the SDLR of civil servants.

7. Recommendations

(i) The researchers have presented the following recommendations to the responsible body in light of the findings of the study. ANRS bureaus should have to improve the social-cultural learning environment as they did for the technical environment. Managers should prioritize building the social capital of civil servants in their bureau to enhance learning and knowledge transfer.

(ii) ANRS bureau employees should have to use the LPW and the welcoming physical environment to learn and develop their ability through collaboration with their colleagues by building their social capital at the workplace. Higher and middle-level managers in ANRS bureaus should work together and organize continuous cross-organization and cross-department experience-sharing programs to create an expansive learning environment.

(iii) Supervisors and managers should scaffold civil servants to enhance their SDLR based on their profession, which significantly affects the SDLR of civil servants. It is less significant to use age, sex, work experience, salary, and level of education as a method of differentiation to select civil servants that need scaffolding to learn at the workplace.

8. Limitations and Future Directions

This research found a social-cultural learning environment problem at the workplace; however, the finding did not indicate what types of social capital problems are in each bureau or even the reasons for this problem. Therefore, further research is needed to identify the focus area of regional bureaus in building social capital. Besides this, the study found that the working institution has a significant effect on the SDLR of civil servants, but it cannot assure which profession is associated with high SDLR by assigning a comparable sample size based on the domain of civil servants. It only takes samples of different occupations of each respective bureau irrespective of their profession. Therefore, further research is needed to identify the effect of other domains on SDLR to prepare a different framework for civil servants' WPL by their profession, which shows a significant impact on the SDLR of civil servants.

Data Availability

The data that support the findings of this study are available from the corresponding author, [E.T. Birhanu], upon reasonable request.

Conflicts of Interest

The authors declare that there are no conflicts of interest in conducting this research.

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