

Training Needs Assessment for Technical-Vocational High School Management in the SEAMEO Country Members

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Abstract

Continuous professional development (CDP) programs for school management are important to keep them updated with technological innovation and new relevant frameworks and policies of the government. They are required to join an in-service training program periodically to get more credits and certification in order to be promoted and increased salaries. However, some scholars have alerted an alarm about an increasing number of training programs without prior needs assessment. The results of needs assessment might guide the content development for training courses. A few studies undertook training needs assessment for school principals. The cross-sectional survey design for 454 (N=454) school management identified the training needs. A self-assessment survey questionnaire with 25 items covering a set of management and leadership skills has three columns comprising great need, some need, and no need for participants ticking any appropriate columns following their needs. The findings pointed out six skills required training courses including *building teamwork*, *total quality management*, *how to motivate teachers/lecturers/faculty*, *interpersonal communication*, *planning and organizing*, and *handling complaints and grievances*. The study suggested to have rigorous guidelines to guide the needs assessment functionally before delivering training programs.

Keywords: Training needs assessment, technical-vocational high school, school management, training programs

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Introduction

The nature of work changes radically as new technologies, educational reforms, and legal frameworks have been reviewed affecting the function of school management (Suaka & Kuranchie, 2018). Some jobs lost and others grew with new policies and equipment requiring the capacity-building programs for individuals (McConnell, 2003). Human resources development empowers people to shape their future of work in terms of skills, competence readiness to meet the fastest changing world of work (ASEAN Secretariat, 2021). The continuous professional development programs (CPD) might upgrade school management's capacities to catch up with technological innovation (Suaka & Kuranchie, 2018). Particularly, the training program is one of the effective means used to develop the school management's competencies to help them achieve the mission and vision of schools (Jacobs, 2003). However, to deliver effective training programs, a training needs assessment can be undertaken functionally. Regular needs assessment for school management in terms of knowledge and skills can be undertaken to raise evidence and data guided for content development functionally (Afkar et al., 2023). Training programs can be undertaken to correct a deficiency that doesn't reach the current state of performance (Barbazette, 2006). Therefore, training needs can be undertaken to close the gap between current performance and desired performance (McConnell, 2003).

If the skill deficiencies are identified, training is the first option to solve the problem (Barbazette, 2006). The training has significant impacts on individual and organization success as jobs and tasks transform technically and digitally toward inclusive growth (McConnell, 2003). In other words, training needs assessment is the process of identifying performance problems in terms of skills and knowledge to ensure that the program delivered runs functionally to accomplish the organizational goals (Brown, 2002). Needs assessment is the procedure of exploring possible areas of improvement that training can be an optional solution (McConnell, 2003). The process of data collection from stakeholders about the implied organizational needs that can be solved by undertaking training programs for a purpose of enhancing current performance is the training needs assessment (Barbazette, 2006). The training purpose is to bring the capacity of school management up to higher levels in terms of skills and knowledge achieving organizational goals (Brown, 2002). School management is a driving force to determine the strategic direction of schools to ensure success (Widiastuty et al., 2022). Therefore, training can be a suitable and

effective intervention to skill deficiencies if it is planned professionally with logical processes (Van Tiem et al., 2012).

Training can be used to improve school management's competencies, skills, and attitudes to maximize quality and productivity to reach a desired state of performance (Van Tiem et al., 2012). Before delivering training programs, Barbazette (2006) proposed five steps of conducting training needs assessment logically. For example, why do we conduct the training? To answer this query, needs versus want analysis and feasibility analysis are considered. Who are the participants of the training course? In response, the target participant analysis can be undertaken. How can the skill deficiency be solved? To accommodate this question, a performance analysis can be conducted. What standards of performance should be applied to reach desired state of performance? In response, a task analysis can be considered. Finally, when will the training occur? To answer this question, a contextual analysis should be conducted.

According to Van Tiem et al. (2012), training needs assessment can be undertaken following these steps consisting of analyzing the context, writing training objectives, setting delivery styles, developing contents, planning training activities, designing a training program, developing materials, and evaluating training results. Training can be used as an effective tool to enhance quality standards of services and products if it is planned logically (Rothwell, 2005). Therefore, as part of reskilling and upskilling program for school management to manage schools effectively, continuous professional development programs can be considered to bring them up to the desired state of performance (Monteiro et al., 2023).

Some performance problems are related to career development enabling school management to be trapped and stagnated in the present occupations because of increased stresses and pressures (Gilley et al., 1989). However, the school management was not aware of the management and leadership skills such as total quality management, planning and organizing, and interpersonal communication because no needs assessment was undertaken prior to organizing the training programs (Suaka & Kuranchie, 2018). School management is not provided with training programs functionally to upgrade their capacities (Tintoré-Espuny et al., 2021). The school performance and learning outcomes of students decline because of poor capacities of school management (Naidoo,

2019). In other words, there was no systematic approach for training needs assessment before delivering some particular training programs (Balisi, 2014). The professional development programs for teachers and school management are often ineffective because of no needs assessment undertaken (Afkar et al., 2023). In some occasions, decision makers such as ministry department directors, provincial department directors or superintendents requested technical departments and divisions to organize a training program without undertaking training needs assessment (Brown, 2002). The training is always planned ineffectively without systematic and consistent processes (Rothwell, 2005). Most of school management encounter the problem of learning and hindering the development of their new skills and knowledge (Jacobs, 2003). It is a risk-taking of wasting resources for an organization to deliver the training program without undertaking the needs assessment (Brown, 2002). Some training programs are supply-driven being irresponsible to the market needs (ADB, 2009). Some organizations didn't deliver training programs to school management functionally hindering students' learning outcomes (Monteiro et al., 2023). Therefore, a training needs assessment should be undertaken to diagnose the prior problems and needs to develop training modules and contents before delivering training courses functionally (Balisi, 2014).

The training needs assessment is required to point out particular matters/areas, to seek management support, to collect data for decision making, and to justify costs and benefits of the training course (Brown, 2002). The training program helps benefit school management and school as a whole as they develop high levels of expertise (Jacobs, 2003). The results might be beneficial for stakeholders. Policy makers, curriculum developers, and instructional designers will be technically guided on what modules, contents and strategies should be considered to upgrade the capacity of school management. The government can set a right direction for investing in the capacity-building programs for school management. The well-designed training contents and modules will inform the school management to administratively and academically ready for upcoming training programs. Finally, the skill gaps between the required skills and school management's skills will be closed for more effective school management (Brown, 2002).

The training program can't solve all the organization problems and challenges (Brown, 2002). In some cases, the contents of skills training programs didn't respond to the industrial needs in a short

run requiring undertaking in-deep the needs assessment (Di Battista et al., 2023). Before delivering the training programs, identified training needs can be conducted to be responsive (McConnell, 2003). The needs assessment might determine whether training programs can be a suitable solution to a current state of performance deficiency (Barbazette, 2006). The research objective is to identify training needs of school management.

One research questions is “On what skills do school management need training programs?”

Literature Review

When the nature of work changes, the role of school management changes requiring capacity-building programs for them constantly (Suaka & Kuranchie, 2018). Many scholars raised the importance of capacity-building programs for school management, but a few scholars discussed the training needs assessment prior to delivering training programs (Balisi, 2014). Before delivering the capacity-building program, needs assessment can be used to identify performance problems in strategic planning and decision making (Ibrahim & Nashir, 2022). There were a few new initiatives responding to the emerging problems. The challenges suggest that existing theories and practices cannot solve the problems. Therefore, the literature captures three different themes as follows:

Building Teamwork and Interpersonal Communication

Interpersonal communication is one of the hot topics used to enhance performance in an organization so that the training course can be undertaken (Brown, 2002). To effectively manage schools, the school management should possess interpersonal communication and teamwork skills (Sunaengsih et al., 2019). Liwanag et al. (2023) employing a qualitative research method to 35 teachers to assess their training needs identified the good competencies for teamwork and interpersonal communication skills. The capacity of school management might be developed in terms of instructional leadership consisting of building positive teamwork and interpersonal communication (Naidoo, 2019). Therefore, school management possessing leadership and management skills such as building productive teamwork and effective communication builds a positive school culture affecting students’ learning outcomes (Memela & Ramrathan, 2022).

Another qualitative study exploring the problems encountered by school management in Turkey

to ten school administrators found that the school management requires training programs on interpersonal communication to ensure effective work flow (Saglam & Bozkus, 2023). Widiastuty et al. (2022) applying a qualitative method to identify the implementation status of school-based management of school principals in Indonesia revealed that school principals exhibit good communication skills in managing their schools. Rehman et al. (2019) exploring the perception of leadership skills for school management found that school management possessed interpersonal communication skills as a relationship between the management, teachers and students. School management mastered the core competency of social-emotional learning consisting of relationship skills with effective interpersonal communication (Brendan, 2023). Finally, Akram and Khan (2021) employing a quality method to six participants in Pakistan found that school management were adhesive to decision making, teamwork and interpersonal communication skills.

These skills are important for school management. However, the studies didn't address other required skills such as total quality management, planning and organizing, motivation skills, etc. In other words, there were different research methodologies in terms of research methods, data collection, data analysis, participant selection, research settings, and research publication dates.

Total Quality Improvement, and Planning and Organizing

Planning and organizing are the critical areas that school management should possess to manage their schools effectively (Sunaengsih et al., 2019). Blossing and Liljenberg (2019) using a qualitative study to 22 school management in Sweden to identify the school leaders' management skills found that school management were competent in planning and organizing skills. Prior planning keeps potential risks to a minimum level with efficient uses of scarce resources (Thompson, 2002). Hussain and Zamair (2011) designed a quantitative study to assess training needs for 178 school principals in Pakistan found that the school management required the training courses on planning and organizing, and total quality management for them to manage school effectively. A qualitative study undertaken by Van Der Voort and Wood (2014) to explore the school management team's capacities in developing school improvement plan in South Africa found that school management possessed total quality management and motivation skills.

How to Motivate Teachers and Handling Complaints and Grievances

The effective school management requires school management to possess motivation and problem-solving skills (Sunaengsih et al., 2019). Gabriel-Wetley (2023) undertook an exploratory sequential design to 280 high school teachers, seven school principals, and three training officers to assess the training needs for school management revealed that school management required the training courses on *how to motivate teachers* and *handling complaints and grievances* for their effective management. Mainline and Smalley (2021) using the descriptive statistics for data analysis to assess the training needs in the United States of America found that school management needed the management and leadership classes, particularly *how to motivate teachers* and *handling complaints and grievances*. Thus, to make changes at schools, school management might possess seasoned expertise in human skills like motivation and supporting skills (Mestry & Govindasamy, 2021).

Rehman et al. (2019) argued that the emphasis of school management's capacities might be managerial practices on how to motivate and inspire teachers, and handling complaints and grievances. Brendan (2023) identifying how school management implement social-emotional learning in their school contexts applying interpretive phenomenological analysis (IPA) to six school leaders found that school management possessed core competencies such as responsible decision and handling complaints and grievances effectively. Therefore, school management should possess management and leadership skills.

Much attention focusing on a variety of research methods from different research settings and participants. This study calls for empirical investigation into school management's capacities in order to assess their needs in terms of training deliveries.

Research Methods

The quantitative research approach with cross-sectional survey design was employed to answer one research question.

Data Collection

Data was collected via the Google Form as the survey questionnaire sent along with the consent form to each of 76 technical-vocational high schools for facilitation to other schools and filling out the questionnaire. Data collection through questionnaires via a Google Form is one of the

effective ways to capture the succinct of the participants' perceptions (Kothari, 2004). They are the members of South East Asian Vocational-Technical High School Network. The consent form along with questionnaires was also sent to the 11 governing board members of South East Asian Ministers of Education Organization Regional Centre for Technical Education Development (SEAMEO TED) for coordination and distribution. SEAMEO TED has formulated SEA Technical-Vocational High School Network for 81 high schools as the members so that the data collection via the Google Form was not constrained.

Participant Selection

The management of technical-vocational high schools is the research participant as they are in the leadership and management roles. To be selected as research participants, they must meet the certain criteria consisting of 1) at least 2 years of work experiences as the school principal; 2) intending to be professionally developed for their capacities; and 3) volunteering to fill out the questionnaire via Google Form. 454 (N=454) have filled out the questionnaires and returned correctly for data entry. If participants volunteer to join a research study, it means that they fill out the questionnaire at the best of their capacities frankly (Beins & McCarthy, 2012).

Research Instrument

The questionnaire in Google Form adapted from Kirkpatrick and Kirkpatrick (2006) was used as a research tool. This means that the content validity was achieved intending to measure what the study investigates (Muijs, 2010). The Google Form questionnaires were divided into two sections: (1) skill items for school management; and (2) demographic information. Questionnaires in Google Forms are widely distributed for dependable and reliable results upon completion (Kothari, 2004). Section 1 comprises 25 items of leadership and management skills with a three-point scale ranging from 2 (Great need), 1 (Some need), and 0 (No need). The scale has three different columns for participants ticking any appropriate one being close to their perceptions. For example, item 1 is *Diversity in the school-understanding teachers*. Item 2 is *How to motivate teachers*. Item 3 is *Interpersonal communication*. Section 2 covers demographic information such as sex, country of origin, age cohort, graduate major, academic degree, years of work experience, etc.

Data Analysis

Primary data was collected from research participants for analysis. The quantitative method was employed with cross-sectional survey design (Creswell, 2012). After getting the weighted scores for each column (great need, some need, and no need) for the total participants of 454 (N=454),

the weighted scores of column *Great Need* were multiplied by 2. The weighted scores of column *Some Need* were multiplied by 1. The weighted scores of column *No Need* were multiplied by 0 as shown in Table 1. The weighted scores from each column were resulted from summing up the scores for that column (Kirkpatrick & Kirkpatrick, 2006). The most weighted ones were ranked in a descending order to the least weighted ones. For example, the most weighted scores ranked No. 1 is 804 for *Building Teamwork*. The least weighted scores ranked No. 25 is 692 for *Written Communication*.

Research Results

The results highlight demographic information and findings of the study as follows.

Demographic Information

Among the 454 participants (N=454), 335 (73.8%) are male. 119 (26.2%) are female. Eight SEAMEO country members consisting of Cambodia (15 for 3.3%), Indonesia (393 for 86.6%), Lao PDR (2 for 0.4%), Malaysia (17 for 3.7%), Myanmar (18 for 4.0%), the Philippines (5 for 1.1%), Singapore (3 for 0.7%), and Thailand (1 for 0.2%) participated in the study. Eight age cohorts consisting of less than 30 years old (8 for 1.8%), 31-35 years old (24 for 5.3%), 36-40 years old (45 for 9.9%), 41-45 years old (102 for 22.5%), 46-50 years old (84 for 18.5%), 51-55 years old (111 for 24.4%), 56-60 years old (72 for 15.9%), and more over 60 years old (8 for 1.8%) filled out the questionnaire. The participants have graduated with a variety of academic degrees. For example, 42 participants (9.3%) graduated with Associate Degrees. 173 participants (38.1%) graduated with Bachelor's degree. 228 participants (50.2%) graduated with Master's Degree. 9 participants (2%) graduated with Doctoral Degree. Two participants (0.4%) graduated with post-doctoral degree. The participants have different six tenure periods as the school principal. 206 participants (45.4%) have worked less than 5 years. 144 participants (31.7%) have worked from 6 to 11 years. 63 participants (13.9%) have worked from 12 to 18 years. 18 participants (4%) have worked from 19 to 23 years. 16 participants (3.5%) have worked from 24 to 29 years. 7 participants (1.5%) have worked for more than 30 years.

Findings

Data was analyzed with weighted scores for each column of great need, some need and no need as shown in **Table 1** with the total participants of 454. The weighted scores for each column were resulted from the summing up of each participant filling out each item/skill.

Table 1. Weighted Scores for Each Item/Skill and Column (N=454)

No.	Item	Great Need (Weighted Scores)	Some Need (Weighted Scores)	No Need (Weighted Scores)	Total Participants
1	Diversity in the school-understanding teachers/lecturers/faculty	300	146	8	454
2	How to motivate teachers/lecturers/faculty	348	101	5	454
3	Interpersonal communication	348	101	5	454
4	Written communication	251	190	13	454
5	Oral communication	307	135	12	454
6	How to manage time	318	127	9	454
7	How to delegate work effectively	312	131	11	454
8	Planning and organizing	348	100	6	454
9	Handling complaints and grievances	348	100	6	454
10	How to manage change	323	127	4	454
11	Decision making and empowerment	332	116	6	454
12	Leadership style application	337	109	8	454
13	Performance appraisal	300	145	9	454
14	Coaching and counseling	325	124	5	454
15	How to conduct productive meetings	294	152	8	454
16	Building teamwork	353	98	3	454
17	How to discipline	337	106	11	454
18	Total quality management	351	100	3	454
19	Safety control	315	136	3	454
20	Budget operation and management	341	109	4	454
21	How to build moral-quality of work life	339	111	4	454
22	How to reward performance	287	161	6	454
23	How to mentor teachers/lecturers/faculty	287	161	6	454
24	How to reduce absenteeism and tardiness of teachers/lecturers/faculty	272	173	9	454
25	How to induce international relations	301	144	9	454

The column of Great Need was multiplied by 2, Some Need by 1 and No Need by 0 to sum up with totally weighted scores (Kirkpatrick & Kirkpatrick, 2006). Each item/skill was ranked following the totally weighted scores as shown in **Table 2**.

Table 2. Totally-Weighted Scores with Ranks

Rank	Item	Great Need (Weighted ScoresX2)	Some Need (Weighted ScoresX1)	No Need (Weighted ScoresX0)	Totally Weighted Scores
18	Diversity in the school-understanding teachers/lecturers/faculty	600	146	0	746
3	How to motivate teachers/lecturers/faculty	696	101	0	797
3	Interpersonal communication	696	101	0	797
25	Written communication	502	190	0	692
17	Oral communication	614	135	0	749
15	How to manage time	636	127	0	763
16	How to delegate work effectively	624	131	0	755
5	Planning and organizing	696	100	0	796
5	Handling complaints and grievances	696	100	0	796
13	How to manage change	646	127	0	773
10	Decision making and empowerment	664	116	0	780
9	Leadership style application	674	109	0	783
20	Performance appraisal	600	145	0	745
12	Coaching and counseling	650	124	0	774
21	How to conduct product meetings	588	152	0	740
1	Building teamwork	706	98	0	804
10	How to discipline	674	106	0	780
2	Total quality management	702	100	0	802
14	Safety control	630	136	0	766
7	Budget operation and management	682	109	0	791
8	How to build moral-quality of work life	678	111	0	789
22	How to reward performance	574	161	0	735
22	How to mentor teachers/lecturers/faculty	574	161	0	735
24	How to reduce absenteeism and tardiness of teachers/lecturers/faculty	544	173	0	717
18	How to induce international relations	602	144	0	746

Research question 1. On what skills do school management need training programs?

Referring to the ranking order in **Table 2**, the six most weighted scores were selected. They are Building Teamwork (No.1 with 804 scores), Total Quality Management (No.2 with 802 scores), How to Motivate teachers/lecturers/faculty (No.3 with 797 scores), Interpersonal Communication (No.3 with 797 scores), Planning and Organizing (No.5 with 796 scores), and Handling Complaints and Grievances (No.5 with 796 scores).

Discussion and Conclusion

If there is no thorough plan and organization prior to the training program, it wastes much money to host the program (Jacobs, 2003). The result of training can be elusive without prior proper plans as part of training needs assessment (Phillips & Stone, 2000). The study identified the training needs for school management. It was resultant in six skills including *building teamwork, total quality management, how to motivate teachers/lecturers/faculty, interpersonal communication, planning and organizing, and handling complaints and grievances*. The results might be applicable for the regional perspectives. For example, ASEAN declaration on human resources development for the changing world of work and its roadmap emphasizes skills investment in management and leadership programs for school management for career development (ASEAN Secretariat, 2020). These skills are crucial for work success enabling people to possess them (Thompson, 2002).

The study was consistent with some empirical studies. For instance, effective school management might possess total quality improvement, interpersonal communication, positive teamwork, and handling complaints and grievances (Cornelissen & Smith, 2022). The results confirmed with Khumalo and Van der Vyver's study (2020) that school management possessed teamwork and interpersonal communication skills, planning and organizing, and motivation skills. To ensure quality education, school management might exhibit effective interpersonal communication, and organizing and planning skills as part of leadership and management skills (Alemu, 2023; Abdellah & AlGhamdi, 2021). In other words, Swedish school management might pay high attention to planning and organizing, and communication skills to run a school successfully (Blossing & Liljenberg, 2019).

Organizing a training program without conducting a training needs assessment to diagnose performance deficiency is a waste of resources such as budget, time and expertise (Barbazette, 2006). However, the study shed light in some limitations. Only eight SEAMEO country members were included in the study hindering the representation of the region. Future research should be considered to extend the country members to the eleven SEAMEO countries. Regarding the gender mainstreaming, more participants are male (73.8%) dominating the results. This might be due to the capacities and policy requirement from each country for promotion of male management. Further research should be undertaken to enlarge to more female participants as school

management. Most of school management (45.4%) are less than 5 years for their services as school management. This might be due to the policies motivating energetic and competent young teachers to be promoted. Future research should be undertaken to capture the perception of older school management. 393 participants (86.6%) from Indonesia enabled the data bias. More participants from other SEAMEO country members should be considered for the future research. Finally, a qualitative research method such as narrative and grounded theory should be initiated to identify in-depth qualitative data to match with the quantitative one.

Effective performance of school management positively reflects academic achievements of students (Mosoge & Mataboge, 2021). To enhance the effective performance, training programs should be considered as parts of reskilling and upskilling programs. Specifically, the training needs should focus on the needs of the school and the need of individual management (McConnell, 2003). Periodical training programs should be considered for school management to strengthen their commitments and capacities for more effective management (Ogba et al., 2020). To be effective, the training programs can be outsourced with thorough plans of action and follow-up activities after the programs (McConnell, 2003). Policies on continuous professional development programs (CPD) should be considered to upgrade school management's capacities ranging from the phase of training needs assessment to training program deliveries and impact evaluation (ASEAN Secretariat, 2020). Finally, the government should invest more in school management's capacity-building programs on technical, administrative, and technological aspects to ensure functional management and leadership (Monteiro et al., 2023).

Education and training system can be designed to provide school management with competencies and skills to grow professionally to meet their career paths for future endeavors (ASEAN Secretariat, 2021). Reflecting on the results, school management can do self-assessment whether their capacities are good enough to manage schools effectively or their capacities require further education and training programs. If they can do self-assessment functionally about what skills need to be upgraded, the school will be managed effectively. School management who has good human skills make positive changes at schools and societal changes as a whole later on (Mestry & Govindasamy, 2021).

References

- Abdellah, A. J., & AlGhamdi, S. A. (2021). School leaders' responsibilities and the effect on quality education: A systematic review. *Journal of Educational and Learning Studies*, 10(1), 193–206.
- ADB. (2009). *Good practice in technical and vocational education and training*. Mandaluyong City, Philippines: Asian Development Bank
- Afkar, R., Béteille, T., Breeding, M. E., Linden, T., Mason, A. D., Mattoo, A., ... & Yarrow, N. (2023). *Fixing the foundation: Teachers and basic education in East Asia and Pacific*. World Bank Group
- Akram, M., & Khan, A. M. (2021). Exploring e-leadership practices in implementing learning management system in private schools of Pakistan. *Pakistan Journal of Distance and Online Learning*, 6(1), 43-64.
- Alemu, A. (2023). Secondary school teachers' perception of quality management practices in Ethiopia: Implications for quality education for all. *Emerald Open Research*, 4(26), 26.
- ASEAN Secretariat. (2020). *ASEAN declaration on human resources development for the changing world of work and its roadmap*. ASEAN Secretariat.
- ASEAN Secretariat. (2021). *Human resources development readiness in ASEAN: Cambodia country report*. ASEAN Secretariat
- Barbazette, J. (2006). *Training needs assessment: Methods, tools, and techniques*. John Wiley & Sons.
- Balisi, S. (2014). Training needs assessment in the Botswana public service: A case study of five state sector ministries. *Teaching Public Administration*, 32(2), 127-143.
- Beins, B. C., & McCarthy, M. A. (2012). *Research methods and statistics*. Pearson
- Blossing, U., & Liljenberg, M. (2019). School leaders' relational and management work orientation. *International Journal of Educational Management*, 33(2), 276-286.
- Brendan, K. (2023). *School leader's perspectives of implementing and supporting social emotional learning (SEL): An interpretive phenomenological analysis* [Ph.D. Dissertation]. Northeastern University
- Brown, J. (2002). Training needs assessment: A must for developing an effective training program. *Public Personnel Management*, 31(4), 569-578.
- Cornelissen, R. P., & Smith, J. (2022). Leadership approaches of principals heading national strategy learner attainment schools in South Africa. *International Journal of Educational*

- Leadership and Management*, 56-83.
- Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th ed.). Pearson
- Di Battista, A., Grayling, S., & Hasselaar, E. (2023). Future of jobs report 2023. World Economic Forum.
- Gabriel-Wetty, F. K. N. (2023). Management development training needs assessment of public senior high school heads in Ghana. *Global Journal of Human Resource Management*, 11(1), 66-86.
- Gilley, J. W., Egglund, S. A., & Gilley, A. M. (1989). *Principles of human resource development* (2nd ed.). Basic Books
- Hainline, M., & Smalley, S. (2021). Pre-service teachers self-perceived training needs associated with program design and management and leadership and SAE development. *Journal of Agricultural Education*, 62 (1), 227-245
- Hussain, K. S., & Zamair, S. (2011). Managerial training needs assessment of heads of secondary schools. *Bulletin of Education and Research*, 33(2).
- Ibrahim, A., & Nashir, I. M. (2022). Trends and patterns of needs assessments in technical and vocational education: A thematic review. *International Journal of Evaluation and Research in Education*, 11(1), 88-98.
- Jacobs, R. (2003). *Structured on-the-job training: Unleashing employee expertise in the workplace*. Berrett-Koehler Publishers.
- Khumalo, J. B., & Van der Vyver, C. P. (2020). Critical skills for deputy principals in South African secondary schools. *South African Journal of Education*, 40(3), 1-10.
- Kirkpatrick, D., & Kirkpatrick, J. (2006). *Evaluating training programs: The four levels*. Berrett-Koehler Publishers.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.
- Liwanag, B. A., Padohinog, E. C., & Balsicas, N. W. (2023). Training needs assessment on the teachers' functional and research competencies: Basis for competency training plan. *Online Submission*, 5(1), 18-26.
- McConnell, J. H. (2003). *How to identify your organization's training needs: A practical guide to needs analysis*. PublicAffairs.
- Memela, G. K. S., & Ramrathan, L. (2022). The perspective of school leadership and management:

- The role of the school principal in academic learner performance. *South African Journal of Education*, 42(2).
- Mestry, R., & Govindasamy, V. (2021). The perceptions of school management teams and teachers of the principal's instructional leadership role in managing curriculum changes. *Interchange*, 52(4), 545-560.
- Monteiro, A., Leite, C., Coppi, M., Fialho, I., & Cid, M. (2023). Education in emergency: Lessons learned about school management practices and digital technologies. *Research in Educational Administration & Leadership*, 8(1), 223-254.
- Mosoge, M. J., & Mataboge, S. K. C. (2021). Empowerment of the school management team by secondary schools' principals in Tshwane West District, South Africa. *Educational Research and Reviews*, 16(4), 93-103.
- Muijs, D. (2010). *Doing quantitative research in education with SPSS*. Sage
- Naidoo, P. (2019). Perceptions of teachers and school management teams of the leadership roles of public-school principals. *South African Journal of Education*, 39(2).
- Ogba, F. N., Ugodulunwa, C. A., & Igu, N. C. (2020). Assessment of training needs of teachers and administrators for effective inclusive education delivery in secondary schools in South East Nigeria. *International Journal of Educational Leadership Preparation*, 15(1), 72-91.
- Phillips, J. J., & Stone, R. D. (2000). *How to measure training results: A practical guide to tracking the six key indicators* (No. 19397). McGraw-Hill.
- Rehman, A. U., Khan, M. I., & Waheed, Z. (2019). School heads' perceptions about their leadership styles. *Journal of Education and Educational Development*, 6(1), 138-153.
- Rothwell, W. J. (2005). *Beyond training and development* (2nd ed.). AMACOM
- Saglam, S., & Bozkus, K. (2023). Problems and solution methods of school managers. *Online Submission*, 67(2), 88-101.
- Suaka, P. L., & Kuranchie, A. (2018). Head teachers' professional management needs and concerns: Evidence from an educational district in Ghana. *African Educational Research Journal*, 6(1), 20-29.
- Sunaengsih, C., Anggarani, M., Amalia, M., Nurfatmala, S., & Naelin, S. D. (2019, April). Principal leadership in the implementation of effective school management. In *Elementary School Forum (Mimbar Sekolah Dasar)* (Vol. 6, No. 1, pp. 79-91). Indonesia University of Education. Jl. Mayor Abdurachman No. 211, Sumedang, Jawa Barat, 45322, Indonesia. Web

site: <https://ejournal.upi.edu/index.php/mimbar/index>.

Thompson, N. (2002). *People skills* (2nd ed.). Palgrave Macmillan.

Tintoré-Espuny, M., Serrão Cunha, R., Cabral, I., & Alves, J. J. (2021). Giving voice to problems faced by school leaders in Portugal. *School Leadership & Management*

Van Tiem, D., Moseley, J. L., & Dessinger, J. C. (2012). *Fundamentals of performance improvement: Optimizing results through people, process, and organizations*. John Wiley & Sons

Van Der Voort, G., & Wood, L. (2014). Assisting school management teams to construct their school improvement plans: an action learning approach. *South African Journal of Education*, 34(3), 1-7.

Widiastuty, R., Neliwati, N., & Rifa'i, M. (2022). Principal leadership in the implementation of school-based management. *Nazhruna: Jurnal Pendidikan Islam*, 5(3), 1203-1215.

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Conflict of Interest

Authors would like to declare no conflict of interests for this study.

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