Chapter 5
Implementation of PAL in a Learning Organization

Y.C. Chau, K.F. Kwong, Chris R. Cao, Kong Bieng Chauh and Kris M.Y. Law

Abstract This chapter presents the project action learning (PAL) implementation experience as real-life cases. PAL uses real-life projects to align individual and team learning with organizational learning (OL). The case company adopted a wavelike approach in its PAL implementation. PAL became the OL vehicle of the case company. An enabling IT-based infrastructure was developed to provide a platform for easy communication, knowledge sharing, and information interchange. The knowledge gained or generated throughout the PAL-driven OL processes could be captured and retained as retrievable organization knowledge. OL facilitation is another vital pillar for PAL implementation, which provides cognitive coaching and coordination to guide the PAL teams, especially their new members through the established PAL process.

5.1 PAL in a Learning Organization

As described in Chap. 4, project action learning (PAL) was built on the theoretical foundation of action learning and uses clearly defined project goals, project process, and team setting to drive both individual and team learning in a systematic way.

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In simple terms, PAL uses real-life projects to align individual and team learning with organizational learning (OL) (Chuah and Law 2006; Law and Chuah 2007).

The overall OL strategy implementation model includes three phases. In the first phase, the OL strategy must be built on a sound theoretical OL foundation and then aligned with the performance objectives of the organization. This explains why a thorough study of the relevant OL theories and the background of the company are needed. In the model, the Fifth Discipline from Senge (1990a, b) is adopted as the theoretical underpinning of the OL strategy. Meanwhile, a preimplementation assessment will give the management necessary information about the organizational status quo and its readiness for OL implementation. Hence, an organizational assessment instrument specially designed for assessing OL readiness (Preskill and Torres 1999) is introduced and included as an element of this phase of the OL strategy.

In the second phase, after the proper OL theory and the background of the company are identified, efforts should be made to set up the OL vision and mission for the company. This also complies with the normal procedures of organizational strategy development. Following this, suitable learning methods need to be identified or developed to realize the OL theory and objectives. In the implementation model, the PAL framework from Law and Chuah (2004a, b, 2006) is adopted as the specific method to achieve the OL theory and objectives. In addition, the four supporting pillars of PAL are identified and enhanced to facilitate its implementation. More details about the development of the supporting pillars are discussed in Chap. 4.

If OL is to be implemented and achieved, in some sense, it should be measurable. In the third phase, after the OL strategy is implemented, its implementation effectiveness needs to be monitored, evaluated, and the strategy fine-tuned accordingly based on the evaluation results. Thus, an evaluation instrument derived from the focus/willingness/capability performance system of Smith and Tosey (1999a, b) is adopted to monitor the effectiveness of PAL implementation in this phase. The overall OL strategy implementation model can be referred to Fig. 5.1.

5.1.1 Setting LO Baselines

Existing organizational development literature lacks quantitative assessments of the different aspects and consequences of general LO-driven management interventions in an organization. There is rich literature on what people believe will occur if the LO philosophy is adopted and implemented (e.g., Garvin 1993; Senge et al. 1994). But relatively few have reported on the assessment or evaluation of the readiness or performance of an organization's LO implementation. As OL practitioners, it is judicious to evaluate the OL readiness of an organization at the initial phase of its LO journey.

Evaluation conducted in support of OL provides an early means for developing a community of like-minded inquirers, harnessing the knowledge capital of its members and addressing problematic issues that face the organization. It can serve as a catalyst for learning and action on organizational issues (Preskill and Torres 1999).

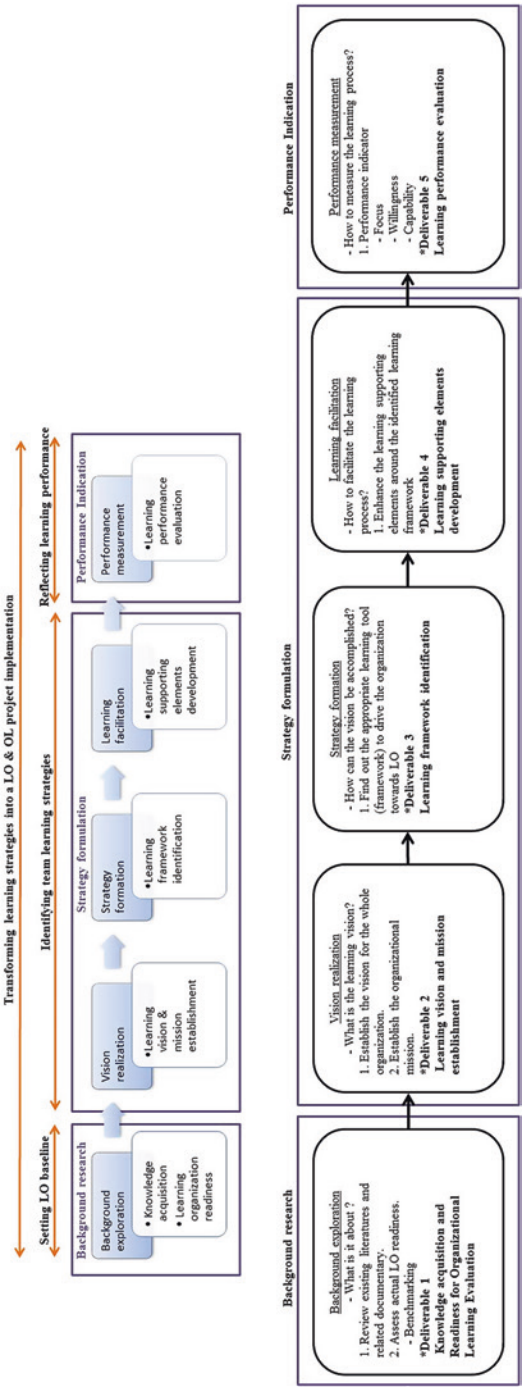

Fig. 5.1 From strategy formulation to strategy implementation

LO readiness evaluation helps an organization to know its status quo and how to prepare for the subsequent OL implementation. At the same time, it can be used to evaluate to what extent the organization is a "learning" one and identify the areas of strength to leverage management interventions and evaluative inquiry processes and areas in need of organizational change and development.

5.1.2 Identifying Team Learning Strategies

Having the LO baseline set, the strategy formulation is started. The strategy formulation includes vision realization, strategy formation, and learning facilitation (Fig. 5.1). It clearly defines objectives and assesses both the internal and external situations to formulate strategy.

In order to galvanize employees to work toward corporate objectives, visions and missions should be more than a sign on the wall. Executives and managers should live them, be seen living them, and constantly communicate them to their employees, so a learning vision should be built up first. In this study, an appropriate learning framework was identified and emphasized as one of the major learning activities to raise the staff's capability through a team learning process.

Corporate learning vision is a short, succinct, and inspiring statement of what the organization intends to become and to achieve at some point in the future, often stated in competitive terms. On the other hand, the mission statement is an organization's vision translated into written form. It makes concrete the leader's view of the direction and purpose of the organization. It is a vital element in any attempt to motivate employees and to give them a sense of priority.

After the vision is created, the OL strategy is developed. A learning tool or framework is needed to drive the organization toward OL, and a learning tool is designed for the learning teams in the organization to achieve effective on-the-job learning. It serves as the core learning activity and aims at building up the learning culture within the project team(s) by systemizing learning in a project. It also provides teams with a challenge (the project) and the learning environment with guidance and facilitation.

After the appropriate learning framework is developed and implemented in the organization, the supporting elements, strategy, technology support, facilitation, and performance management (Chap. 4), should be presented, enhanced, and promoted to make the learning process more effective. Such learning supporting elements foster team learning tailored to the needs and wants of the individual.

Organizations can cultivate more accurate, effective learning through the creation of supportive, stimulating environments. Psychological safety, openness, the recognition and acceptance of differences, acceptance of errors and mistakes, and flexibility are essentials if learning is to flourish. Therefore, a supportive environment must be created where individuals can share learning without it being devalued and ignored, so more people can benefit from their knowledge and individuals become empowered.

5.1.3 Reflecting Learning Performance

After the OL strategy is formed, its implementation is monitored with unexpected learning results detected. OL performance evaluation is undertaken regularly. It is important to see whether the implementation of the OL strategy can lead to the intended organizational outcomes. With the three performance elements, focus (F), willingness (W), and capability(C), the assessment of progress toward the "learning organization" can be achieved.

Through the five main stages (background exploration, vision realization, strategy formation, learning facilitation, and performance measurement) of developing the OL strategy, the transformation of the performance-based OL strategy into an effective practical OL implementation plan is addressed; the relationship between the OL strategy and the OL performance can be determined. It thus can be argued that a practical and effective OL strategy will bring higher levels of OL performance.

5.1.4 Case: PAL Implementation

In this section, a real company's PAL journey is documented and discussed. The case company is a renowned multi-national high-tech manufacturer with global operations. It was a top management decision to embrace the LO and OL concepts in early 2002. However, the initial staff reaction and acceptance at the beginning was not very satisfactory. The first challenge of this collaborative project was to gain a better understanding of the employees' motivation and learning needs. The top management's decision was then highly publicized, and staff was encouraged to jump onto this OL bandwagon to spur learning and improvement initiatives. Policy changes were made and resources allocated to support the OL initiatives.

The case company adopted a wavelike approach in its PAL implementation. Each round of the PAL cycle lasts about three to four months. Since 2003, many rounds of PAL implementation have been conducted in the case company to drive its performance excellence. A pilot round of PAL implementation started in 2003. From 2004 to 2006, there were six rounds of PAL implementation. By 2006, more than half of the case company Business Unit (BU) 1's staff had participated in various PAL projects. In 2006, the company went through big organizational restructuring, and BU1 was dissolved to meet changes in the business goals and operational needs. But in 2007, PAL-based OL was relaunched in BU8 (another BU) and later BU2 (another BU). It is still continuing as at the time this book is being written up. The PAL-driven OL journey of the case company is depicted in Fig. 5.2.

Table 5.1 summarizes the rounds and the number of PAL projects carried out in the case company's BUs. During the past six years, a total of 67 PAL projects

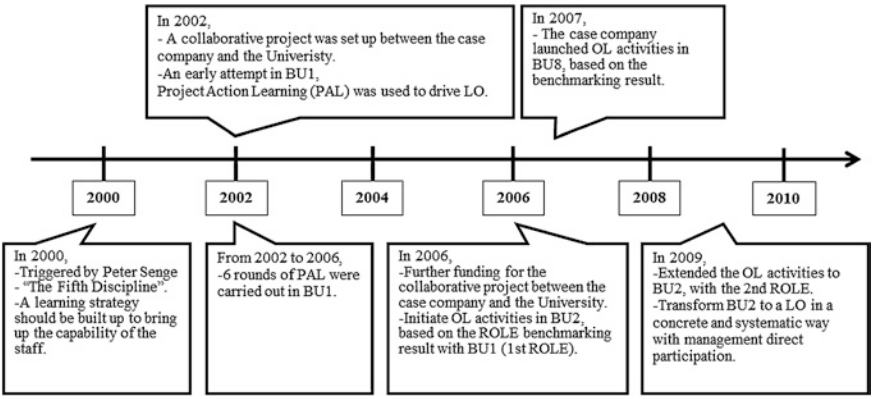

Fig. 5.2 PAL-driven OL journey in the case company

Table 5.1 Rounds of PAL from 2004–2011

Round	Period	PAL projects
PAL implementation in BU1		
1st	May 2004–July 2004	3
2nd	Aug 2004–Dec 2004	4
3rd	May 2005–Sep 2005	7
4th	Oct 2005–Jan 2006	6
5th	Apr 2006–June 2006	7
6th	July 2006–Sep 2006	8
PAL implementation in BU2		
1st	Oct 2006–Dec 2006	2
2nd	Apr 2007–Jun 2007	2
PAL implementation in BU8		
1st	Oct 2007–Dec 2007	3
2nd	Apr 2008–Jun 2008	3
PAL implementation in BU2		
1st	Nov 2008–Jan 2009	5
2nd	Oct 2009–Dec 2009	10
3rd	Apr 2010–Jun 2010	5
4th	Oct 2010–Dec 2010	2

have been carried out. Through this wavelike implementation strategy, increasing numbers of staff have been involved in this ongoing OL campaign.

It is also noted that once PAL participation and performance is included as part of the staff's overall performance evaluation, PAL gradually but surely becomes accepted as part of the organization's practice and culture. In other words, PAL involvement is less seen as extra work and becomes the OL vehicle that takes the case company to achieve its OL goals.

5.2 Measuring OL Readiness

Before launching any learning activities, it is necessary to know whether the organization is "ready" for the LO and OL implementation. The people should have enough initiation and momentum toward learning. They should be willing to learn and realize the importance of learning. Therefore, the Readiness for Organizational Learning and Evaluation Instrument (ROLE) is used for this purpose.

Once an organization is considered as "ready" for LO and OL implementation, learning activities can be launched. After the learning activities are set, it is necessary to understand and evaluate what benefit the OL implementation has brought to the organization. Therefore, the FWC instrument is adopted for this purpose.

The instrument developed by Preskill and Torres (1999), namely the ROLE, is most recommended for the evaluation of organization readiness. The ROLE survey helps to determine an organization's strengths and weaknesses in the context of OL readiness.

The ROLE is designed to examine an organization's infrastructure and environment which are the underlying foundations for OL implementation within the organization. An organization's infrastructure and environment can strongly influence the extent to which its members learn and use their learning to support personal and organizational goals. The elements of the organization's infrastructure and environment include culture, leadership, communication, systems, and structures (Preskill and Torres 1999). The nature of these components provides the basis on which evaluation efforts can be undertaken and sustained. Measuring these components will help to indicate how they operate or interact within an organization and whether they facilitate or inhibit learning. The ROLE instrument can be referred to Appendix 2.

There are six facets or dimensions used in the ROLE for evaluation—culture, leadership, systems and structures, communication, teams, and evaluation.

5.2.1 Culture

As pointed out by Carleton (1997), culture influences the way people treat and react to each other. It shapes the way people feel about the company and the work they do; the way they interpret and perceive the actions taken by others; the expectations they have regarding changes in their work or in the business; and how they view those changes.

5.2.2 Leadership

Evaluative inquiry and OL will not succeed if the organization's leadership is indifferent or hostile to establishing learning processes and systems. Leadership

support must come from the very top of the organization. Leaders of an LO must involve its members in the development of a learning vision. They must then work to ensure that the organization's systems and structures support the vision's implementation throughout the organization. Leaders not only talk about the importance of learning, buy they also live it. It is important that employees routinely hear and see their leaders engaging in learning activities, talking with others about learning, and planning future learning initiatives. Leadership is not just telling people what is important and what to do; it is also about providing a role model.

5.2.3 Communication

In most organizations today, there are an increasing amount of data being collected from customers, clients, employees, consultants, and market researchers. The problem is not that there are not enough data with which to answer an organization's questions, but that the quality, timeliness, and content of existing data do not meet the information and learning needs of organization members. Nor is sufficient time typically devoted to meaningful interpretation of the data that are available. How information is communicated to organization members and the organization's external constituents is a key determinant of the extent to which an organization wishes to learn. Indeed, the entry point for any learning to occur is communication.

5.2.4 Systems and Structures

The systems and structures of an organization mediate organization members' ability to interact, collaborate, and communicate with each other—the success of OL and evaluative inquiry efforts. Unfortunately, traditional organizational structures frequently have led to the fragmentation of tasks and contributed little to helping employees understand how they do something affects others' jobs. Many employees have functioned independently and have had little need or ability to link their efforts with others in the organization. In response to the limitations of the old structures and the needs of today's organizations, some suggest that the "best organizational structure is one that does not seem to exist: a transparent, superconducting connection between people and customers" (Stewart 1997). When an organization's structure is developed with a system's perspective, members come to understand what they do and how they contribute to other employees' work and ultimately to the organization's success.

5.2.5 Teams

Many organizations structure their work processes in ways that bring employees together to work on organizational issues. Team learning seeks to create "a shared

meaning about a process, a product, or an event" (Schrage 1989), where individuals come to know themselves and each other better in the process. In general, teamwork can be thought of as the key building blocks for effective OL.

5.2.6 Evaluation

Evaluation is a process of systematic inquiry to provide information for decision-making about some issue, program, project, process, organization, system, or product. Evaluation and reward systems are designed to rekindle interest in performance for its own sake, as well as to link that performance to the mission and vision of the organization. Compensation based on group performance can occur at team or departmental levels.

In short, the ROLE is built on the aforementioned six dimensions. The design of the instrument reflects the contemporary views on OL, and evaluation processes and practices. The study suggests that an organization should have certain infrastructural and environmental elements in place if it is to implement OL effectively.

The ROLE instrument consists of 78 items grouped into six major dimensions with four of these dimensions having eight subcategories. Three additional questions are included to provide information about the respondents and the organization. As individuals respond to each item, a picture begins to emerge that describes the extent to which OL and evaluation practices and systems are present in the organization.

Respondents are asked to respond to 75 Likert scale items on a scale of 1–5, with 1 meaning "strongly disagree" and 5 meaning "strongly agree." There are also three yes/no items and three multiple-choice items. In administering the instrument with organization members, it is important to emphasize that there are no right or wrong answers. What matters most is their opinion based on their experiences. Use of the instrument is most effective when its items are answered honestly and the organization treats individuals' responses confidentially (Preskill and Torres 1999).

The ROLE result can also be used to benchmark with other organizations to indicate the success of the LO. Benchmarking is the search for industry best practices that lead to superior performance (Camp 1989) and is widely used to promote and to measure the learning capability of an LO (Lähteenmäki et al. 2001). The benchmarking measurement of the OL capability considers a set of indicators and for this reason assumes the configuration of a multi-criteria analysis like the use of the ROLE instrument described above.

In general, employee readiness levels or attitudes toward change may be measured through interviews and surveys. Broadening job scope or job enrichment may be measured through job analysis, direct observation, and measures of actual job accomplishment that then can be benchmarked against industry or internal standards (Holpp 1994). For this study, a survey was used to compare the LO readiness between the case company's BU1 and BU2, the former having started OL implementation since 2002 (Law and Chuah 2005, 2006).

In the case company, after the comparison with the previous BU which was classified as ready for OL implementation, the LO readiness of the target BU in this study can be determined.

BU1 is an organization with more than 4 years of LO- and OL-driven experience, the ROLE of BU1 was carried out in 2006 and it sets out a benchmarking for the reference of LO readiness of an organization.

On the other hand, the target group participating in this study was Business Unit 2 (BU2). The business in BU2 is rather stable, and the people in BU2 had some thoughts on LO and OL as the top management had introduced the theory of LO to them ten years before. However, due to organizational changes, the top management left BU2 and joined another Business Unit (BU1) in 2002. In 2006, the top management came to take up the position in BU2 again and BU2 was the main focus group in this study. Before initiating the OL strategy, a ROLE was carried out to see how much of BU2 was ready for LO implementation by benchmarking with BU1.

The ROLE questionnaires were sent to the management in hard copies. Senior management included the top management executives like president, vice president, director, and senior managers and they answered with respect to the whole organization (view of the entire organization), while the middle management included individual department managers and they answered with respect to the individual team or department only (view of the entire department). Two weeks were allowed for returning the questionnaires in person to the researchers.

After obtaining the ROLE result of BU2 (2006), it was used to benchmark the ROLE result of BU2 (2006) to that of BU1. The benchmarking result can be used to determine whether BU2 is ready to initiate the LO activity. The ROLE can also be used as a regular measurement to evaluate the OL readiness of an organization at different times. After the top management took up the position in BU2 after several years in 2009, the top management wished to know the change brought by the launched OL activities.

Here are the ROLE survey results.

I. Survey Information

From Table 5.2, there are total 14 managers participated in the survey of BU1 and 13 managers returned the questionnaire, with 93 % return rate. In BU2 (2006), 13 managers participated in the survey and all managers returned the questionnaire within two weeks. While in BU2 (2009), total 17 managers participated in the survey and 16 managers returned the questionnaire. When compared with BU1, there are more managers in BU2 with fewer senior-grade managers. On the other hand, when compared with BU2 in the two different periods, more middle management joined BU2 with the growth of the business.

II. Data Reliability

The alpha coefficient ranges in value from 0 to 1 and may be used to describe the reliability of factors extracted from dichotomous (i.e., questions with two possible

Table 5.2 Survey information for BU1 (2006), BU2 (2006), and BU2 (2009), respectively

	BU1 (2006)	BU2 (2006)	BU2 (2009)
Participants	BU1 management	BU2 management	BU2 management
Date	Oct 24, 2006–Nov 3, 2006	Nov 14, 2006–Nov 24, 2006	Apr 6, 2009–Apr 17, 2009
No. of participants	13/14	13/13	16/17
Senior management	5	2	2
Middle management	8	11	14
Return rate (%)	93	100	94

Table 5.3 Reliability statistics of all variables in BU1 (2006), BU2 (2006), and BU2 (2009), respectively

Sample	Cronbach's alpha	No. of items
BU1 (2006)	0.968	6
BU2 (2006)	0.789	6
BU2 (2009)	0.896	6

answers) and/or multi-point formatted questionnaires or scales (i.e., rating scale: 1 = poor, 5 = excellent). The higher the score is, the more reliable the generated scale is. Nunnally (1978) has indicated 0.7 to be an acceptable reliability coefficient.

From Table 5.3, for the total of six items in the readiness evaluation for different BUs, the alpha coefficient was greater than 0.7. The reliability is highly acceptable among the six items and is suitable for further analysis.

III. Benchmarking

From Fig. 5.3, by the view of entire organization, it can be seen that the ROLE result of BU1 is better than BU2 (2006), especially in the areas of evaluation and systems and structures. However, with the adequate value in the culture and leadership sectors, the top management believed that the OL could be initiated under the proper guidance and facilitation. After three years of launching the OL activities, the ROLE result of BU2 in 2009 proved that the OL implementation, with the help of OL-driven instrument PAL, did help the organization stay on the right track toward the LO. All dimensions had a certain degree of improvements.

From Fig. 5.4, by evaluating from another perspective, from the view of department, it can be seen that all the values of dimensions are very close. The score given by middle managers in BU2 is similar to the score given by middle managers in BU1. The departmental situation is quite similar between BU1 and BU2. Though some dimensions of BU2 were not as good as BU1 at the time of 2006, it showed a gradual increase in all dimensions from 2006 to 2009. Similar to the result shown in Fig. 5.6, middle managers also thought that the learning activities, including PAL, carried out through the years, were beneficial to the OL implementation in all six dimensions.

By the scoring illustrated above, the organization was classified as ready for OL implementation (BU1), while the investigating organization (BU2) had the "green signal" to initiate the OL activities with benchmarking with BU1 in 2006.

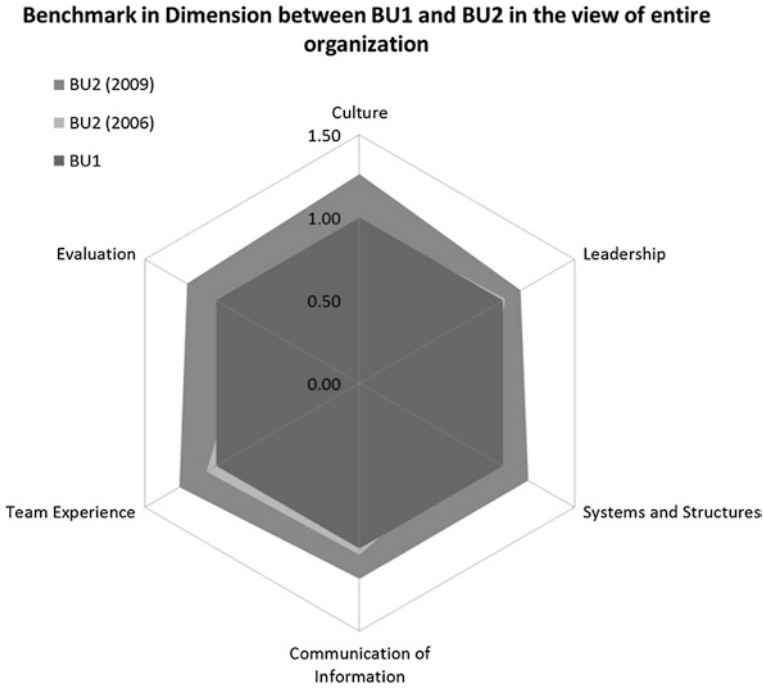

Fig. 5.3 Benchmark on dimension between BU1 and BU2 in the view of entire organization

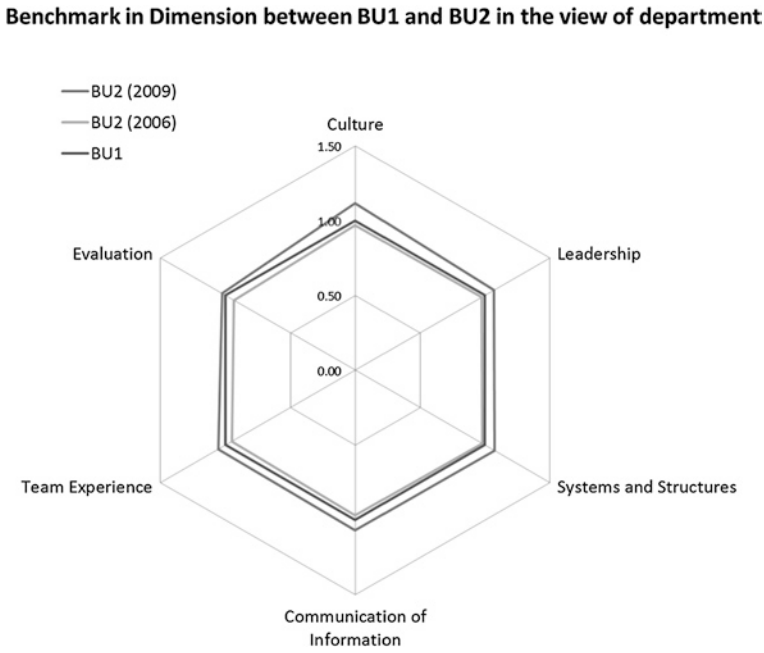

Fig. 5.4 Benchmark on dimension between BU1 and BU2 in the view of department

After three years of OL practice, with another round of the ROLE in 2009, BU2 scored even better than BU1. As a result, BU2 was supposed to be ready for the OL implementation and the OL implementation result did give a positive indication on the learning strategy deployed over the years.

5.3 The E-OL Infrastructure

The growth of e-learning in organizations has strongly influenced the evolution of computer-based learning architecture such as learning management systems and learning support systems, in response to demands for better administration of learning with personalized developmental paths, up-to-date records on learning activities, and rapid deployment to geographically distributed workforces.

The organizational learning support system (OLSS) is a computer-based system that can handle cumulating technical or intellectual knowledge and support multi-direction interactions, discussions, and knowledge sharing among PAL members. The OLSS must take into consideration the variation of requirements at different phases of the PAL process, as shown in Fig. 5.5.

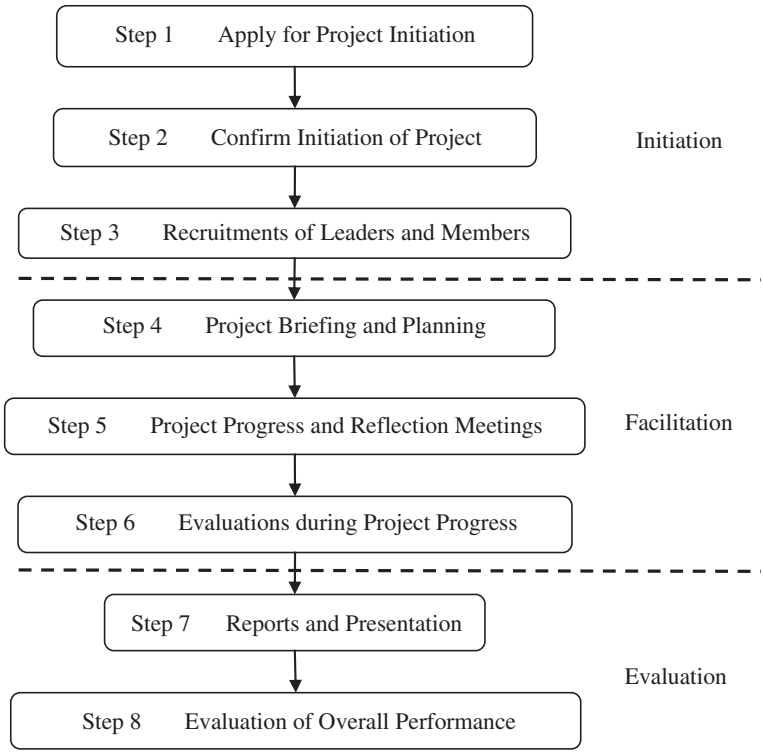

Fig. 5.5 Phases and steps in the PAL process

The eight PAL processes are grouped into three phases: initiation phase which includes diagnosing and action planning, facilitation phase when the PAL teams are working and learning on their respective projects, and evaluation phase where project performance and learning outcomes are evaluated. In short, the OLSS must incorporate different functions that satisfy PAL teams and learners' requirements at different phases.

5.3.1 Conceptual Design

The conceptual process model of the OLSS is shown in Fig. 5.6.

Its "initiation phase" at the beginning, followed by the "facilitation phase" and concluded by "evaluation phase," complements the three phases of the PAL process.

Each PAL starts with team building and proceeds with the main PAL thread accompanied by a member log thread. In the initiation phase, PAL application spaces are provided, where the participants log on to document their PAL project work, problems, and intended solutions. Before the commencement of a PAL round, there is a project proposal meeting where teams present their projects to management for approval.

The facilitation phase consists of three functions that are aligned with the milestone/activity sequence of the PAL process. Firstly, milestone spaces are initialized in the team workspaces. Secondly, an OL facilitator can post relevant materials and descriptions there. The project teams can access and use these materials, while they work toward their respective PAL project milestones and goals. Thirdly, the

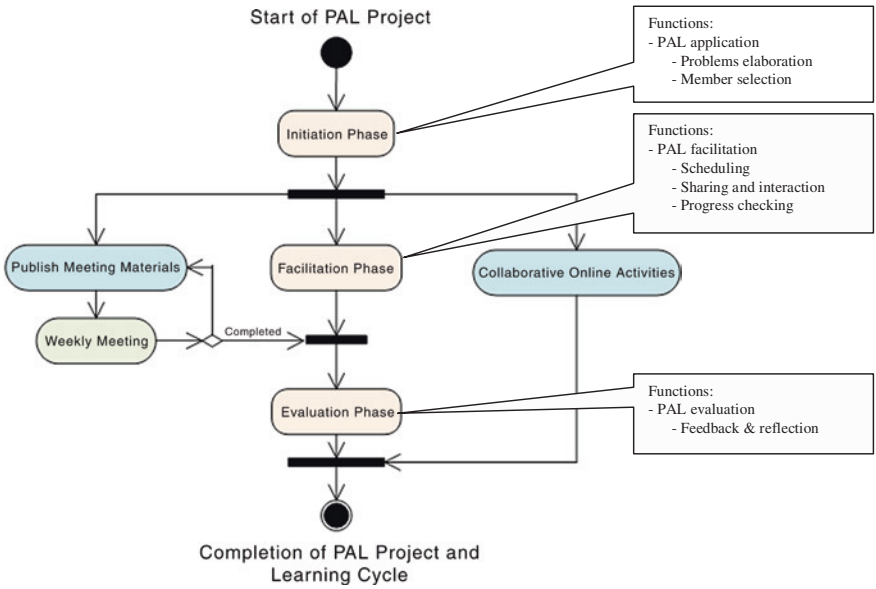

Fig. 5.6 Conceptual process model for OLSS

system plays host to the intermediate project meetings of each PAL team (with occasional involvement of the facilitators). The system helps to log the project progress, team interactions, and reflections.

Collateral online activities provide platforms for online discussions among participants and for online consultation with the OL facilitator. The online consultation is an integral part of the online discussion sub-module.

The activities in the evaluation phase include self, peer, and facilitator evaluation. It also supports feedback collection, in the form of questionnaire (structured, quantitative feedback) and reflection sheets (unstructured, qualitative feedback).

Needless to say, regular discussions were held with PAL team members to note their expectations and requirements of the OLSS throughout these different phases of the PAL process.

5.3.2 Physical Design

As shown in Fig. 5.7, an overall knowledge management system is in place in the case company. The OLSS is one of the supporting pillars which aims to facilitate the PAL implementation. The OLSS is composed of a number of modules, from the initiation module and facilitation module, to the evaluation module, assisting and facilitating the PAL implementation during its various phases. Within each module, various sub-modules are presented to support the PAL activities at different phases.

Microsoft SharePoint is a Web application platform developed by Microsoft. It is one of the Web content management and document management systems that

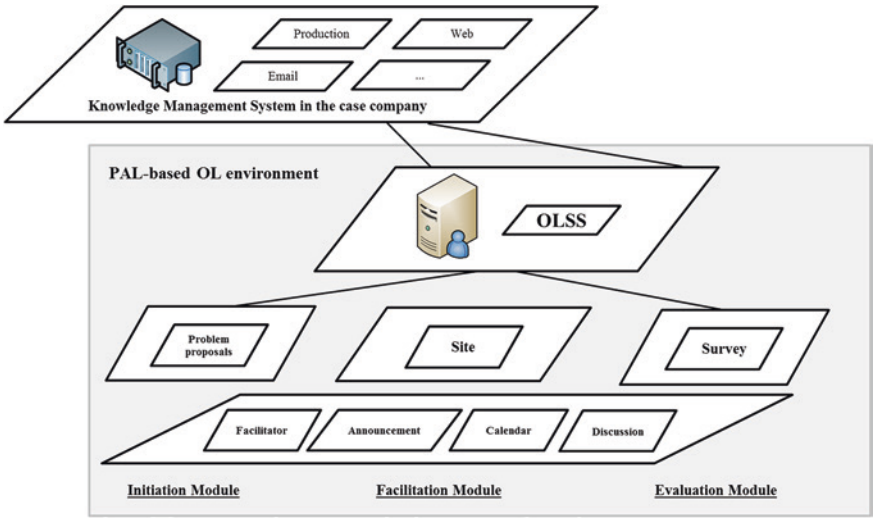

Fig. 5.7 Multi-level system modeling of the OLSS

the case company uses. The IT team of the case company can provide sufficient resources and support for the development of any new system, including the system built and used in this research.

Therefore, Microsoft SharePoint is used to build the OLSS. It is a free add-on to Microsoft Windows Server providing a Web portal with commonly needed features. This also includes a collection of Web parts that can be embedded into Web pages to provide SharePoint functionality such as dashboards, document workspaces, lists, alerts, calendar, contact lists, discussion boards, and wikis in a custom Web site. It can also offer a "fluent" ribbon user interface that should be familiar to users of Microsoft Office. This interface provides a general user interface for manipulating data, page editing ability, and the ability to add functionality to sites. This can make the user more willing to use the system as the interface is familiar to the systems they use in their daily work.

The OLSS's different modules support the needs of different PAL phases, for instance, the "Problem Proposals" sub-module in the initiation module, the "Sites" sub-module in the facilitation module, and the "Blended Evaluation" sub-module in the evaluation module. The PAL members can make use of the system modules/sub-modules to finish the tasks during PAL implementation. They can hand in reports, store up documents, share experiment reports with others, or even perform the evaluation in the OLSS.

PAL itself includes a learning project or topic with the learning contracts as members' commitment, the project milestone as the PAL schedule, and a knowledge base to support or store the knowledge created or shared during the PAL implementation. All these PAL activities are captured by the modules of the OLSS which exist at different phases.

The OLSS is designed to provide Web-based functions to support the various activities throughout the PAL phases. The OLSS offers the participant a "living" page that evolves with the progress of the PAL process. The home of each PAL team in this OLSS is its PAL main page, which is linked to all other modules of functions of the system.

After the physical design and development of the OLSS was completed, the OLSS was put into practice to support the ongoing PAL implementation. PAL facilitators offer training courses to let the PAL participants know how to use the OLSS. Then, the participants can start to use the OLSS at different stages during the PAL process, with initiation tasks, facilitation tasks, and learning evaluation tasks within the PAL.

5.3.3 System Work Flow

The OLSS offers different functions to support the PAL-driven OL in the organization from initiation phase and facilitation phase to the evaluation phase. All the enabling and supporting functions of the OLSS are built upon the process steps of PAL.

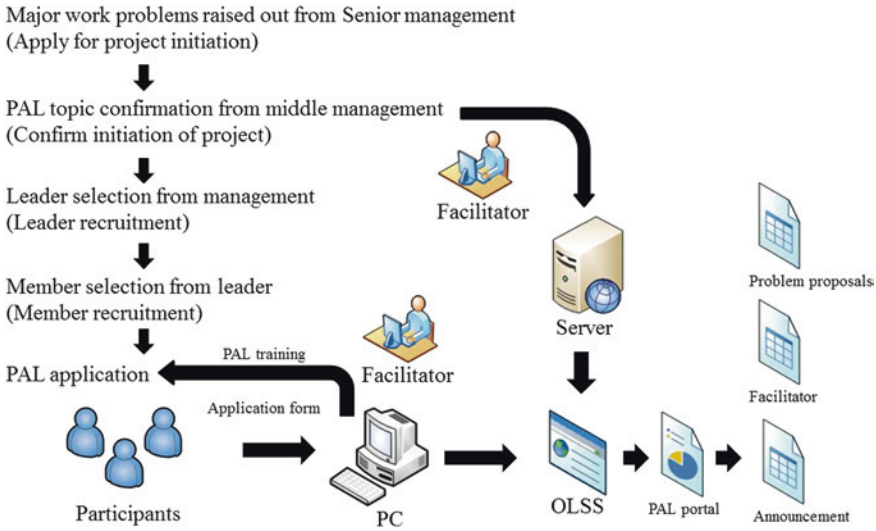

Fig. 5.8 Schematic diagram of the initiation phase (1–2 weeks)

I. Initiation Phase

Figure 5.8 is a schematic diagram of the activities involved in the initiation phase, which includes project application, approval, leader, and member recruitment. This phase is carried out in the first two weeks of the PAL implementation. Three sub-modules are used in this phase: "Problem Proposals" sub-module; "Facilitator" sub-module; and "Announcement" sub-module.

II. Facilitation Phase

With PAL approved by the management at the start of each PAL round, the PAL team starts its PAL project and enters into its PAL project and the facilitation phase. This phase usually takes about 12–14 weeks throughout a PAL cycle. Figure 5.9 shows the schematic diagram of the activities involved in the PAL facilitation phase. Five sub-modules are used in this phase: "Facilitator" sub-module; "Announcement" sub-module; "Calendar" sub-module; "Discussion" sub-module; and "Site" sub-module.

III. Evaluation Phase

Lastly is the (learning) evaluation phase: Other than the five sub-modules used in the facilitation phase, one more sub-module is also used—"Survey" sub-module. This phase usually takes up about 10 weeks of the PAL implementation. Figure 5.10 is a schematic diagram of the activities involved in the evaluation phase.

Typically, at the start of a PAL project (initiation phase), each PAL team needs to make a proposal for the permission to initiate a PAL team. The proposal includes the background of the project, the performance and learning goals that are going to

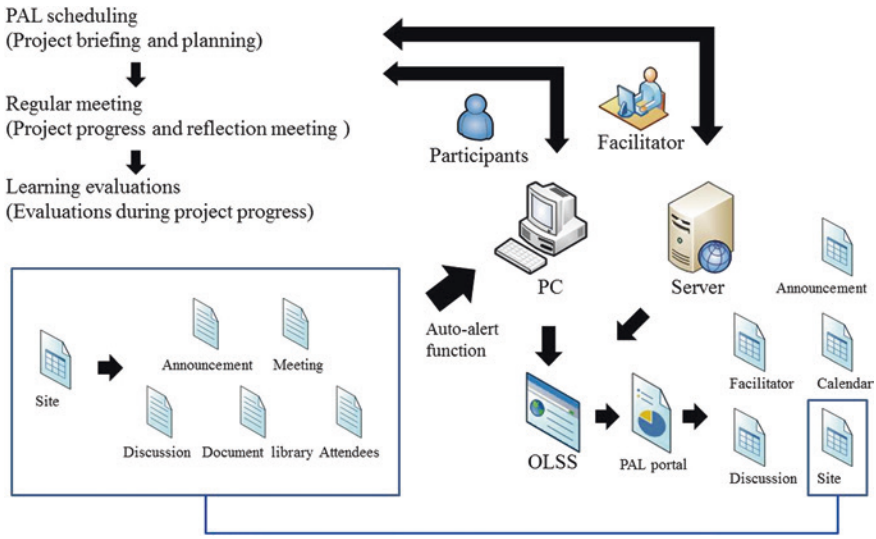

Fig. 5.9 Schematic diagram of the facilitation phase (12–14 weeks)

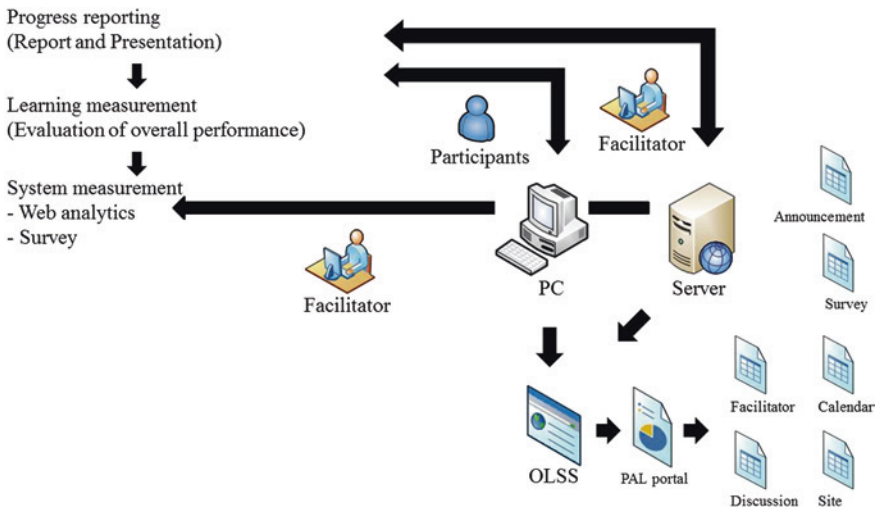

Fig. 5.10 Schematic diagram of the evaluation phase (~10 weeks)

be achieved, the selection of the members, and also the schedule of the project. Figure 5.11 shows the "Problem Proposals" sub-module that was used for the proposal application: The applicants simply upload the proposal to the system, and the management is notified by the auto-e-mail delivered by the system. The management then decides whether the applied proposal can be approved. The applicants can receive the approval letter from the system as well, indicating that the management has accepted the proposal and the PAL project can then be initiated.

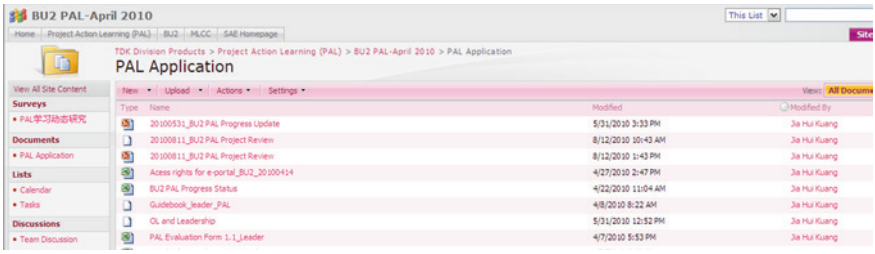

Fig. 5.11 The "Problem Proposals" sub-module of the OLSS

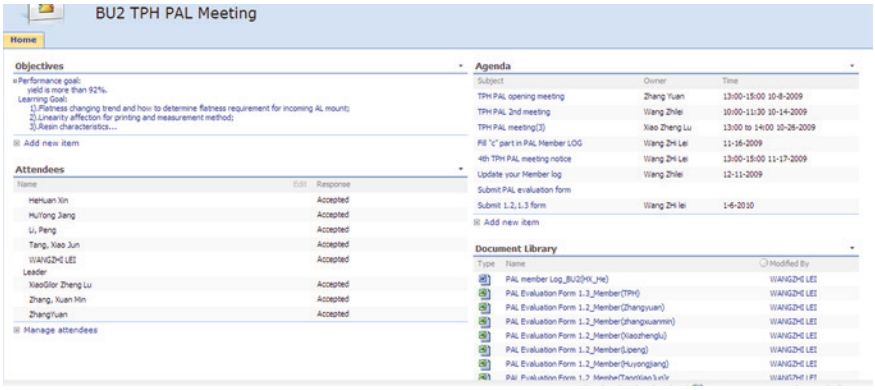

Fig. 5.12 The "Team Workspaces" sub-module of the OLSS

Figure 5.12 shows the "Team Workspaces" sub-module that each individual PAL team used to organize its own progress at the PAL facilitation phase. Each PAL team has its own team objectives (performance and learning goals), own PAL members, project meetings, and knowledge created and shared in the so-called document library. The PAL team can make use of the workspaces to make meeting announcements, store meeting agenda and minutes, and share the project or experimental reports with others. Other team members can easily be notified by the e-mails they receive through the company mailing system. Besides, each PAL team can generate its own workspace style, to fit its purpose and likelihood. Each PAL team has the right to modify its own space, in order to develop their personal interest in using the system, to visit the OLSS, and to motivate fellow team members to learn and share more through the system.

Another sub-module used in the PAL facilitation phase is "Discussion", which is an online discussion site where people can hold conversations in the form of posted messages. As shown in Fig. 5.13, each PAL team has its own discussion page, where they can raise any questions in the forum, and again, the system automatically sends an e-mail to the related parties for the newly posted topics from the forum.

Fig. 5.13 The "Discussion" sub-module of the OLSS

Besides, other members or teams can also search for the solutions of similar questions that they may face in their own projects. The discussion forum acts like another knowledge repository to provide possible information or solutions to the PAL participants.

During the PAL implementation, the PAL facilitator has significant influence over the participants' learning. The facilitator can guide the PAL team throughout the process, to make sure that the team is running on the right track. Figure 5.14 shows the PAL references or guidance provided by the PAL facilitator. The PAL team can always refer to the guidance given by the facilitator or ask for help from the facilitator in the Discussion forum that was introduced before.

During the PAL implementation, different learning assessments are used to assess the PAL progress, including self-evaluation, peer evaluation, and leader evaluation, as shown in Fig. 5.15. Surveys are also used to understand the learning circumstances of the PAL teams. The PAL members can simply click buttons on the OLSS and follow the instructions to complete the evaluations. The data are stored in the OLSS database for further analysis and elaboration, while the OLSS

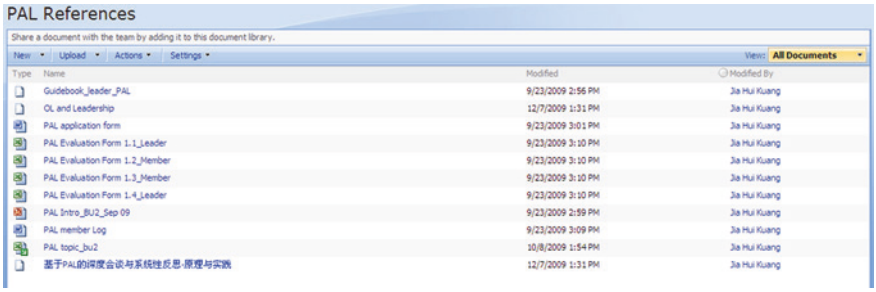

Fig. 5.14 The "Facilitator" sub-module of the OLSS

Fig. 5.15 The "Blended Evaluation" sub-module of the OLSS

can automatically generate basic summary for the responses, to give preliminary descriptions on the result.

All the system sub-modules described above contribute to the construction of a knowledge base which support the learning project. The OLSS was developed to enable the PAL participants to learn not only the intellectual learning needs stored up in the document library in the OLSS, but also the development of the social skills (by means of the Web-based discussion forum) and the personality (motivated by the self-controlled team workspaces). The OLSS was designed to help the PAL participants to achieve superior results along with personal growth in terms of higher self-confidence, openness to experience, self-respect, and respect for others and their environment.

5.3.4 System Demonstration

The OLSS was built to facilitate the implementation of PAL, aiming at addressing all three levels of learning which include intellect, social skills, and personality. Here, a case was used to demonstrate the OLSS implementation during the whole PAL process: One of the PAL rounds in BU2 (October 2010–January 2011) was used for this demonstration. Two PAL teams were involved in that period.

Three phases were involved along the PAL implementation, the initiation phase, followed by the facilitation phase and lastly by the evaluation phase. Different modules were built up to support each of the three phases, and various sub-modules were also involved in different modules.

I. Initiation Phase (Initiation Module)

The initiation phase includes the activities of PAL introductory briefing and PAL application. The "Problem proposals" sub-module inside the initiation module is used for the PAL application. All the problem proposals of a certain round of PAL are listed in this sub-module.

Firstly, senior management picks up potential topics, i.e., those topics that are all related to the real working problems. Those potential topics are then discussed

with middle management for PAL topic confirmation. After the topics are selected and confirmed, the learning facilitator puts the topic information into the OLSS for publication to the staff. The specific PAL portal for that PAL round is then built up. At the same time, the PAL team is formed, from leader selection to member recruitment. After the PAL team is formed, the learning facilitator offers PAL introductory training to the newly formed teams, including the introduction of the OLSS.

Before the official launch, each PAL team needs to fill in the application form for management approval. All the PAL information is recorded in this application form, including the performance and learning goals, member composition, and function. All these application forms are uploaded and stored inside the "Problem proposals" sub-module of the OLSS. Others can check the information or background of the individual topics via this sub-module.

The PAL training materials and other related references could be found inside the "Facilitator" sub-module. The "Facilitator" sub-module is used along the whole PAL implementation for reference. The appointed learning facilitator hosts this sub-module for the purpose of knowledge sharing. When the learning facilitator identifies any learning-related materials or information, which is worth to share with the PAL teams, he or she can thus use this sub-module space for knowledge sharing with other learners.

In addition, for any message to be informed to the participants, the learning facilitator and PAL leaders can make use of the "Announcement" sub-module for message publication. Similarly, the participants are notified by auto-e-mails. Figures 5.16 and 5.17 show snapshots of the main page of the OLSS and the PAL portal, respectively.

II. Facilitation Phase (Facilitation Module)

The facilitation phase includes the activities of PAL scheduling, regular meeting, and learning evaluations. Several sub-modules are built to support the facilitation

Fig. 5.16 Main page of the OLSS

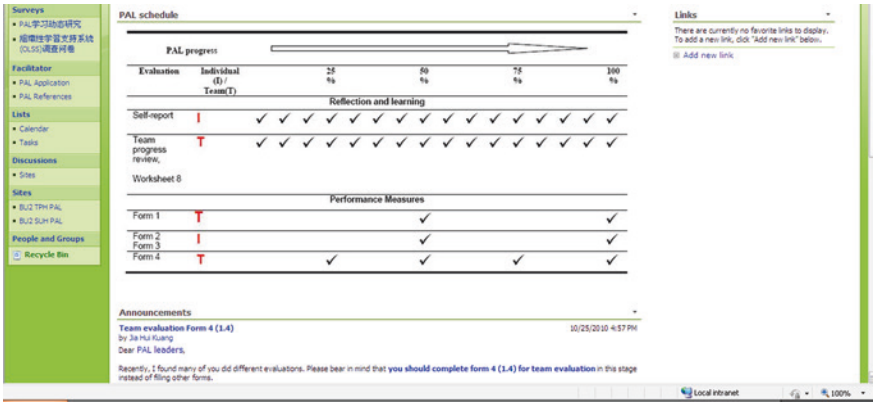

Fig. 5.17 PAL portal (October 2010–January 2011)

module. After the PAL application has been approved, the PAL teams start to hold the initiation meetings for project briefing and planning, according to the PAL time frame (around 4 months), the learning facilitator or the PAL leaders can mark down the PAL milestones in the "Calendar" sub-module, and all the important dates are marked or labeled in the calendar list, for instance, the date of the review meeting, the learning evaluation, or the close-up meeting. Besides, the "Calendar" sub-module has an auto-alert function, so the participants can be notified by e-mail of any activities marked down in the calendar beforehand.

The "Facilitator" sub-module is also presented to support the "Facilitation" phase; participants can treat it as a library for PAL information searching if necessary. When the participants want to raise any questions regarding their PAL projects, they can make use of the "Discussion" sub-module on the main screen of the PAL portal. The "Discussion" sub-module is a kind of forum that allows the PAL participants to place any questions and seek answers from other colleagues or internal experts. Others can also look for the solutions to similar questions through this sub-module, to utilize the existing knowledge and avoid making the same mistakes again.

For the team's internal facilitation, the learning facilitator establishes a site for each PAL team, the "Site" sub-module. Each PAL team has their own workspace for knowledge sharing with their own team members. Within the "Site" sub-module, there are five main sections: Announcement, Meeting, Discussion, Document library, and Attendees. PAL teams have their own rights to manage their own workspaces, which can enhance their personality and eventually attract them to use the workspace more for team communication interaction and knowledge sharing. The PAL members can make announcements to their own members on upcoming events or meetings in the Announcement section. They can upload the meeting agenda and minutes in the Meeting section. A Discussion section is also provided for internal team discussion. Members can use the Document library section to store any reports for knowledge sharing, and the learning evaluations are also stored in this section. An auto-alert function exists in all these sections by linking to the Attendees section. All members listed up in the Attendees section

Fig. 5.18 The "Calendar" sub-module

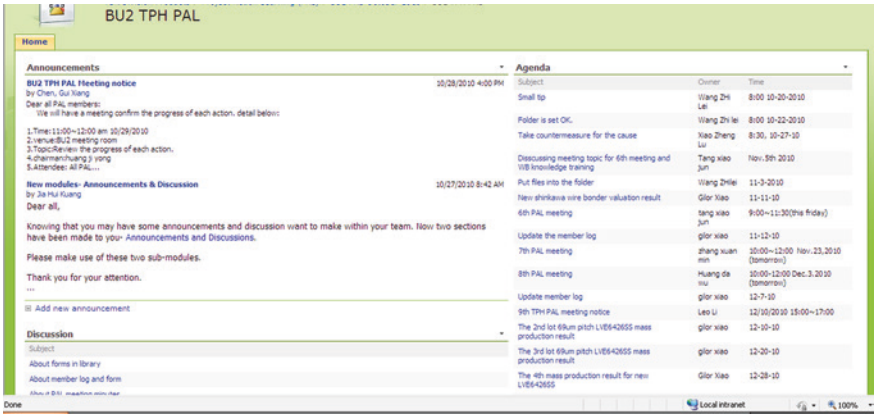

Fig. 5.19 The "Site" sub-module

receive auto-e-mails on any changes in the above four sections. Therefore, the PAL teams can make use of the "Site" sub-module to manage their project progress and reflection meeting, performing evaluations during project progress. When they need help, they can refer to the references in the "Facilitator" sub-module inside the PAL portal of the OLSS or they can raise any questions to the learning facilitator or internal experts when necessary. Figures 5.18 and 5.19 show snapshots of the "Calendar" sub-module and the "Site" sub-module, respectively.

III. Evaluation Phase (Evaluation Module)

The evaluation phase includes the activities of progress reporting, learning measurement, and OLSS evaluation. Similarly, participants can report on PAL progress and learning measurement to the "Site" sub-module. They can upload

the working reports and presentations in the Document library section inside their team workspaces. The learning evaluation forms can be obtained from the "Facilitator" sub-module, and they can upload the completed evaluations to the Document library section inside the "Site" sub-module.

In order to understand the performance of the OLSS, a "Survey" sub-module was developed. The questionnaire was made in an electronic format inside the "Survey" sub-module. Participants are notified by e-mail to complete the survey within a certain time frame.

The OLSS usage can be obtained from the site usage report which is generated automatically from the login information of the users in the system. Figures 5.20 and 5.21 show snapshots of the "Survey" sub-module and the Site usage report, respectively.

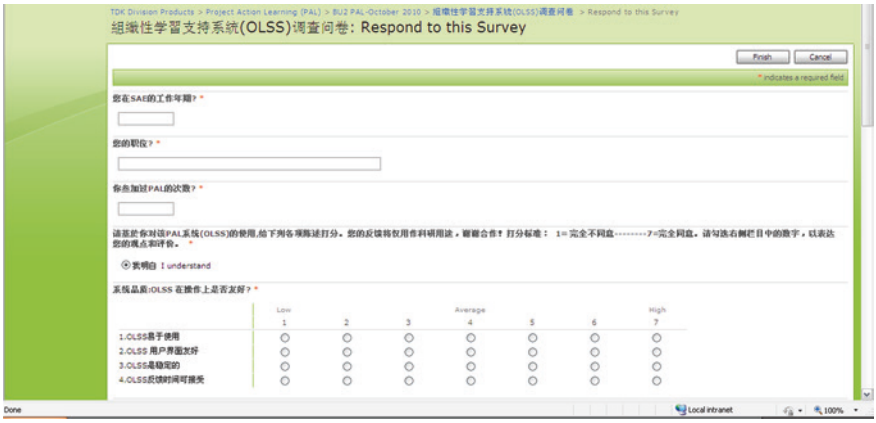

Fig. 5.20 The "Survey" sub-module

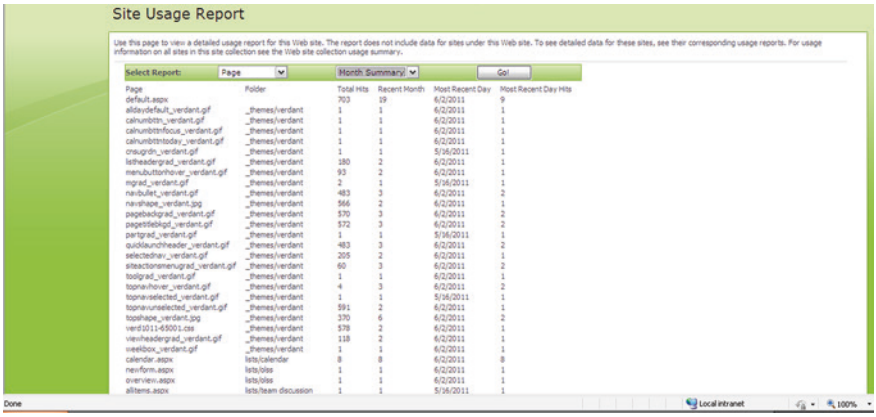

Fig. 5.21 The Site usage report for the OLSS

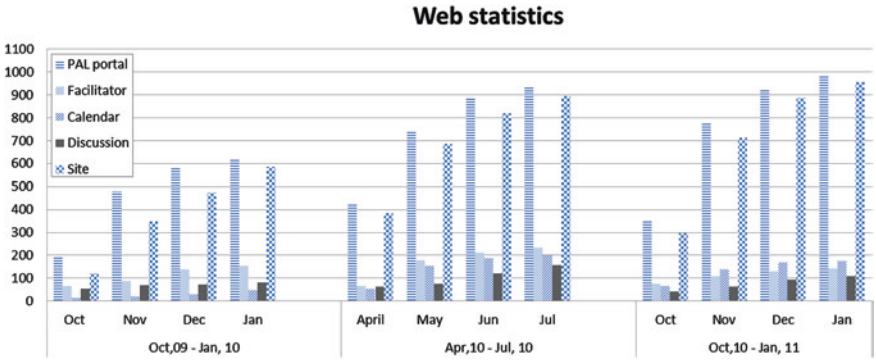

Fig. 5.22 Web statistics for OLSS usage

The learning facilitator collected the site usage data each month during the PAL implementation. As each PAL cycle usually lasts for around four months, there were around four data collection points all over a single PAL cycle.

In Fig. 5.22, the top five sites that the PAL participants used are listed, and it can be seen that the Web usage increased over the PAL cycles, from 600 hits to around 1000 hits. The participants became more familiar with the OLSS and willing to use the system for sharing, discussion, and communication. In general, they tended to use more of their own sites, as they had the freedom to manipulate the site based on their own interest. They could develop their own personality using the site function that eventually builds up the ownership for site maintenance and usage. They felt secure about using the OLSS for learning and sharing.

On the whole, the OLSS comprises three modules: the initiation module, the facilitation module, and the evaluation module. Different sub-modules are included to facilitate the PAL implementation. The OLSS aims to raise not only the intellectual level of the PAL participants via the document repository, but also social skills (by internal/external discussions) and personality (by personalized workspaces).

From building up an OLSS on the process of system design, implementation, and evaluation, it was expected that the PAL implementation would become more smooth and effective. The whole learning progress of the PAL was documented and captured by the use of the OLSS, including the working reports, project knowledge, discussion issues, meeting reports, learning, and system evaluations. All related PAL knowledge was centralized in the OLSS so that all participants could get the most updated and comprehensive information on their own. As the PAL knowledge base was gradually built up, more valuable knowledge can be retrieved. Others can search for corresponding solutions easily when similar problems appear again.

Other than the intellectual level of the individuals being built up, the opportunity for discussion in the OLSS provides a medium for participants to exchange ideas at anytime and anywhere. The discussion result is also useful to others with

similar problems. Though face-to-face interaction is still important for the discussion, online Web discussions are also beneficial to participants, especially for those who are not willing to express themselves so often. On the other hand, with the participation of superiors, PAL participants are willing to join in and express more in the OLSS discussion room. This directly motivates participants to learn more during discussions with other members. Social skills (social and teamwork ability) can also be built up at the same time.

Ownership is important and necessary to keep participants using the OLSS. The personalized feature from the Site sub-module gives an opportunity to let PAL participants change the layout settings to suit their needs, including the color, appearance, font size, and folder management. Participants are attracted to use the OLSS more as they find it is easy and more suitable for their own use. The learning atmosphere or climate can be enhanced with more people willing to use the OLSS, with personalized features. They are willing to accept more and become less reluctant to use the OLSS than the conventional style of project implementation process. Meanwhile, the personality of the individual is enhanced.

After the intellectual level of individuals is enhanced, with social skills developed through face-to-face and online discussion with peers, their motivation toward individual learning is also enhanced. When PAL participants are willing to share their knowledge with others, with the help of the OLSS, through consecutive PAL cycles, the organization will start to transform into a state of LO.

5.4 The Roles of Facilitators

As mentioned in Chap. 4, one of the four pillars that enable the PAL vehicle to perform is OL facilitation. This section will drill down this pillar to discuss about the definition of OL facilitation and facilitator, why such a role is needed, and how to assume this in real working environment, and by whom.

5.4.1 Toward a Definition of OL Facilitation and Facilitator

Facilitation is often used when a group encounters some issues or situations that it cannot easily handle on its own. Facilitated groups in general are found to be better at generating ideas, breaking deadlocks, and involving people, thereby gaining greater commitment to course of action and team building (Esther 2005). Different researchers have examined the roles of facilitators in different group work settings. Fox example, Havergal and Edmonstone (1999) studied how a facilitator helps a team to work together in a collaborative way by focusing on the mechanics and process of how the team's participants work together. Heron (1999) found that a facilitator should give clear notion of empowering and supporting participants to interact, collaborate as well as develop and learn in the action or experiential

learning group. Additionally, the roles of facilitator may also include enabling reflective dialogue (Senge 1990a, b; Isaacs 1999), helping participants to recognize and understand their defensive behaviors and actions (Argyris 1999), managing the dynamic of the group, and maintaining it in positive forms (Esther 2005).

So, what are the roles of facilitators in OL setting? Taking the PAL-driven OL as an example, Law and Chuah (2004a, b)'s earlier field study in the case company has found the need for the OL facilitation outside the PAL team membership. Indeed, the original Learning Organization Facilitating Team (LOFT) is one of the four supporting pillars of PAL-based OL practice and mainly plays the roles of PAL process administrator and resources coordinator. They are PAL-driven OL facilitators. The responsibilities of LOFT include informing PAL teams to follow the stipulated learning process, managing PAL-related documents and information, coordinating training resources for PAL teams, responding to members' inquiries related to the PAL process, and acting as a liaison office between senior management and PAL teams.

However, the OL problems/barriers observed during the preliminary field research clearly indicated that further research is still needed to re-examine the roles of PAL facilitators in the OL setting that was becoming much harsher and more uncertain than the environment in which PAL was founded. To find out what was wrong exactly, a field research was conducted in late 2008 during which we interviewed 29 PAL stakeholders and observed (non-intrusively) the weekly PAL review meetings of five PAL teams. The following difficulties were observed and reported.

First, the feedback from PAL members across different PAL teams revealed a growing common perception that PAL participation was an additional workload rather than an opportunity for learning and self-development, or in other words, they were doing this for the sake of management's instructions. This empirical evidence supports the following findings that in many organizations, a chasm exists between the company's needs for continuous learning and improvement and the motivation and readiness for the work-based learning of its employees (Cummings and Worley 2005); learning is usually driven by political forces outside the group, and commitment of the team members is poor (Marquardt 1999); not everyone is a self-motivated natural learner (Smith 1999). This situation deteriorates after organizational restructuring. Heckscher's (1995) work suggests that many middle managers respond to downsizing by isolating themselves and narrowing their focus to their own jobs, dwelling on the past, and ignoring opportunities to learn about issues involving the entire organization or its customers.

Second, some aggressive or defensive behaviors such as arguing or even quarreling with each other or clamming up were observed during the PAL review meetings. This was further supported by some PAL team leaders' negative feedback regarding the states of communication and learning reflection in their teams. With the absence of open and honest communication, the PAL teams would never approach the root causes of their problems by themselves. This in turn reduced their self- and team learning effectiveness. These findings are consistent with Argyris (1982) contention that organizational defensive routines are ubiquitous and anti-learning.

To put it simply, the first problem is more concerned with the insufficient motivation and initiatives of organizational members for PAL participation, whereas the second is closely related to PAL participants' lack of self- and team learning capabilities. These two problems/barriers embedded in most OL implementation are systematic problems caused by the interaction and influence of a wide range of organizational, managerial, and environmental factors.

The previous LOFT mainly played a rather passive housekeeping role of ensuring that the mechanics of the PAL process had been followed. This seems to be inadequate to redress the tough OL environment. The lack of learning motivation and the emergence of aggressive/defensive behavior in the face of conflicts compounded superficial learning outcomes. A more proactive and engaging PAL facilitation process is thus needed.

5.4.2 Roles of PAL Facilitators

To overcome the PAL implementation difficulties, it is envisaged that the OL facilitation process should extend beyond the passive administration and coordination roles and incorporate the more proactive functions of boosting the learning motivation of PAL participants, improving PAL team communication, and enabling deep learning of PAL teams. The facilitators with their new and extended roles can be viewed as lubricant and catalyst in the PAL-driven OL.

To put it another way, the extended roles of PAL facilitators make them both "learning motivation reinforcers" and "team learning effecters." PAL facilitators need to enhance PAL participants' motivation, involvement, and commitment toward their respective PAL projects through extensive communication. Meanwhile, they need to act as a proactive enabler of teams' in-depth dialogue and critical reflection that will effect PAL team learning. These two extended roles are needed to help PAL participants to

- Identify the focus and value of their PAL project
- Reflect on and build up their positive attitudes toward PAL
- Resolve team conflicts and reduce aggressive/defensive behavior by using dialogue
- Achieve deeper learning in their PAL project through facilitated team reflection.

5.4.3 A Practical PAL Facilitation Model

The extended roles of PAL facilitators eventually need to be achieved through a series of periodic or timely "interventions." The interventions mentioned here are mainly designed for facilitators to intervene in the learning process of PAL teams so as to enhance the teams' learning dynamics, capabilities, and effectiveness. A

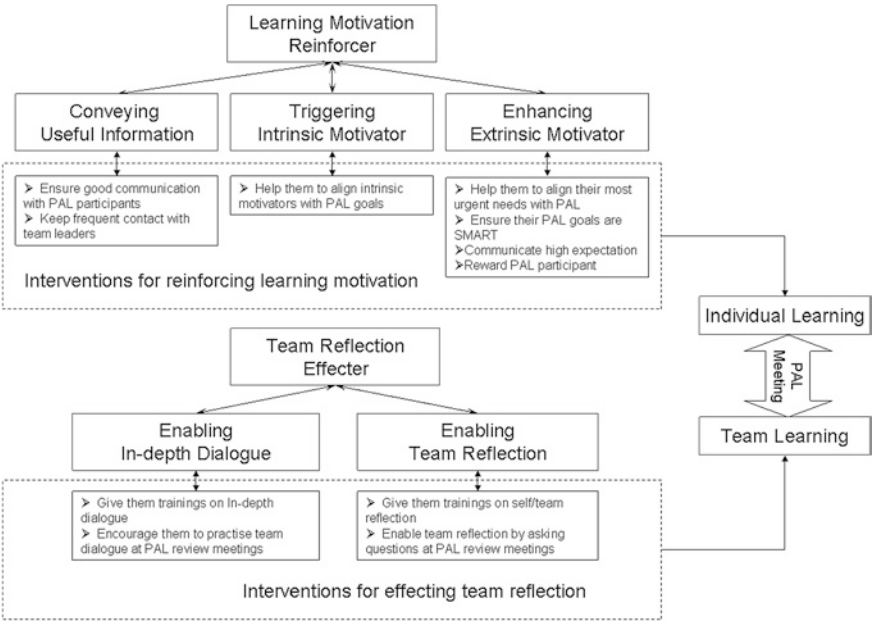

Fig. 5.23 A PAL facilitation model for PAL-driven OL

practical PAL facilitation model summarizes the relevant interventions as below (see Fig. 5.23). The following sections will discuss how these interventions are developed.

5.4.4 Learning Motivation Reinforcer

As mentioned earlier, the original LOFT was designed to mainly take up administrative and housekeeping roles of ensuring that the PAL process had been followed. Findings from the preliminary field research indicated that these are quite inadequate to cope with the unexpected change of organizational setting. Although the PAL teams are able to deliver their project objectives, staff's insufficient motivation to be actively engaged in learning had led to little or superficial individual and team learning outcomes. A more proactive and engaging OL facilitation process is needed to redress the situation.

To steer the PAL implementation onto the desired track, PAL facilitators need to shoulder the extra role of enhancing employees' learning motivation. They should step beyond the housekeeping roles of the old LOFT and play an active role to help the PAL teams and members to achieve higher levels of performance and learning. In other words, they need to be actively communicating with PAL teams, sustaining their momentum, and coaching them to learn, capture, and share their learned knowledge throughout the PAL process. In this regard, we see the

facilitators as "learning motivation reinforcers." This new role will be achieved through a series of "interventions."

The mainstream motivation theories, i.e., expectancy theory (Vroom 1964), goal setting theory (Locke 1968; Robbins 2000), needs theories (Maslow 1943; McClelland 1961; Alderfer 1972; Reiss 2000, 2004), and those in relation to human belief and attitude, social influence, and cognitive process (Fishbein and Ajzen 1975; Venkatesh and Davis, 2000; Kilbourne and Pipher 2000; Hoffer 2002), together with our practical experience in PAL implementation, form the basis to develop the interventions to reinforce the learning motivation of PAL members. Basically, each of the interventions aims to reinforce one of the contributing factors of learning motivation. Details of the interventions are discussed below.

5.4.4.1 Communicate Management Support for PAL Implementation

This intervention involves the behavior of facilitators to convey PAL participants the messages from management about the company's situation and the relevant OL strategy, including its purposes, activity plans, and past achievements. Management supports and expectations for PAL implementation must be clearly communicated and reinforced to PAL participants to mentally construct their attitudes toward PAL. Attitude is "a learned predisposition to response in a consistently favorable or unfavorable manner with respect to a given object" (Fishbein and Ajzen 1975). Supports and expectations for certain courses of action, especially those perceived to be from important persons, are potentially potent external forces to a person which can be translated into his/her favorable beliefs, attitudes, and behavioral intention regarding that courses of action. Management is arguably important figures in their organizations. Hence, their messages for and expectations on certain organization-wide strategies or activities, like PAL-driven OL, can naturally drive their staff to move in that direction. "Expect more and you will get more. High expectations are important for everyone, for the poorly prepared, for those unwilling to exert themselves, and for the bright and well-motivated" (Chickering and Gamson 1987). The social influence theories of compliance and internalization (Venkatesh and Davis 2000) explain the causal mechanisms behind.

5.4.4.2 Communicate Principles and Values of PAL Implementation

Sufficient trainings on the principles of PAL process, action learning, and team learning must be offered to participants. Through the trainings and communication, facilitators should let PAL participants comprehend PAL's values and potential benefits to individuals and gradually internalize positive attitudes toward PAL participation. In addition, facilitators need to respond to PAL participants' doubts and worries about exerting efforts to the relevant activities and enhance their conviction toward PAL. "An effective communication program can minimize the uncertainty and fear of the unknown associated with change" and "the lack of reliable information

leads to rumors and uncertainty" (Brown and Harvey 2006). The effectiveness of the training rests with the dialogue between facilitators and PAL participants. It is through such dialogue that facilitators could help PAL participants to better identify and align their intrinsic needs and desires, such as needs for achievement and recognition, for growth and development, with the performance and learning goals of their respective PAL projects. More importantly, facilitators should let PAL participants believe that their engagement and efforts will eventually develop them to become more valuable and well-rounded individuals to the organization. The recognition of the value and benefits of PAL would encourage them to see PAL participation not as something that "we have to do" but rather something "we need."

5.4.4.3 Act as Role Models

This intervention requires both PAL team leaders and facilitators to actively be involved in PAL implementation to coach and encourage PAL members to learn and develop themselves throughout the PAL process. Moreover, facilitators should keep frequent contact with PAL team leaders and members to reinforce their conviction toward the PAL projects, thereby arousing their intent to be actively involved. Lessons could be learned from similar interventions for enhancing learning motivation (Chickering and Gamson 1987). Here, we emphasize that PAL facilitators should have active contact with PAL members and help them to get through tough times and maintain the PAL project activities and momentum. It is all about being there with them to explore and resolve problems rather than letting them feel that they are supervised or monitored.

The communication can take different forms, such as face-to-face conversation, phone calls, or e-mails, while the content may cover project progress, difficulties encountered, helps needed, encouragements, helpful guidance and suggestions, latest developments, and so on. Through these contacts and interactions, a facilitator can gradually build up credibility and gain acceptance.

5.4.4.4 Relate PAL to Job Demands

Facilitators should help potential PAL participants to identify their needs or problems at work and encourage them to form PAL teams to resolve the identified issues. There is great advantage to be had if PAL projects are able to help meet urgent needs at work. If a PAL project is capable of supporting its members to overcome work-related challenges and improve their performance, they will very likely perceive its participation as useful and raise the intention to be actively involved. For example, if a batch of new products frequently suffers from quality problems, complaints from client and criticisms from higher-level management will be inevitable and a serious blow to the production team. In this case, a PAL facilitator can encourage the production team to set up a PAL project to learn from the process of handling the quality issue. The PAL facilitator must be equipped with the skills to ask probing questions to get the PAL participants to identify their demands and challenges on their jobs and distinguish between their "must do's" and "nice to do's."

5.4.4.5 Develop "Smart" Learning Goals for PAL Members

Facilitators must ensure that PAL members' learning goals are "SMART" enough. Here, "SMART," the well-known recipe for effective action planning, stands for specific learning objectives, measurable checkpoints, achievable targets, relevant to job demands, and to be achieved in a specific time frame. The mechanism of goal setting theory (Locke 1968; Robbins 2000) underpins this intervention. Facilitators must help PAL participants recognize the importance of their goals being "SMART" and ensure that they find the right ways to be really "SMART." To achieve this in practice, facilitators should ask participants simple yet probing questions that help to decompose their learning goals into specific milestone objectives that are clear and measurable. The facilitator can then help the PAL team to translate these measurable objectives into meaningful evaluation rubrics. Once agreed, the rubrics will be used by themselves as well as their managers to assess their efforts and contributions. Meanwhile, the facilitator also helps the team to develop their action plans in line with the "SMART" objectives.

5.4.4.6 Encourage PAL Participants with Material Rewards from Top Management

In general, staffs at operational level are more sensitive to immediate material rewards. To provide contingent material rewards is a quick-acting stimulus to spur many staff's involvement in PAL projects. Again, past research shows that "once PAL related evaluation has been included as part of the staff's overall performance measurement, PAL gradually but surely becomes accepted as part of the organization's practice and culture" (Kwong et al. 2006). The PAL facilitation should help to publicize the "attraction" of such rewards to the right audience.

5.4.5 Team Learning Effecter

5.4.5.1 Provide Trainings on Team in-Depth Dialogue

This intervention aims to impart the knowledge of in-depth dialogue and how it can be used effectively to resolve conflicts, overcome defensive routines, and improve the quality of collective thinking and communication (Senge 1990a, b; Isaacs 1999; Burson 2002). Isaacs (1999) particularly pointed out that in-depth dialogue is the creation of common meaning through an interactive process of active listening, respectful exploring of assumptions and differences, and building a context for thinking together. It is "a conversation with a center, no sides." In-depth dialogue allows its participants to share and weave together individual pieces of mental images and meanings regarding a topic to form a holistic view of the underlying entire system. Through in-depth dialogue, personal assumptions and mental/reasoning models are made more visible and intelligible so

that collaborative inquiry into their causes can emerge (Isaacs 1999), which in turn leads to generative learning and systematical conflict/problem resolution. Facilitators can tap into such communication skills to intervene deadlocks in PAL teams, create an atmosphere of rationally exploring those sensitive, focal issues, and gradually instill the mind-set of team in-depth dialogue. Such skills will enable PAL team members acquire the built-in capability to look for more constructive solutions to deal with conflicts/problems in their respective PAL projects.

5.4.5.2 Use of Team in-Depth Dialogue

To enable in-depth dialogue in a PAL team, a facilitator should first shape the communication style of the team by establishing the ground rules for in-depth dialogue (see Table 5.4). The facilitator should explain the meanings of the rules to both the team leader and members and get their agreement and contract to follow the rules throughout PAL meetings. By and large, the "ground rules" require participants to suspend their judgments, question their own assumptions, open themselves to others' views and interpretations (Schein 1992), encourage different voices and uncertainties, and more importantly view conflicts or problems as learning opportunities.

Secondly, the facilitator should be vigilant about the subtle changes of PAL members' tones, words, emotions, and behaviors during team discussion. Feelings of safety and trust are crucial for participants, especially lower-rank staff, to express freely their views and ideas. To achieve this, the facilitator must convince the one with the highest rank in the team to show genuine respect to different views. As team members bring their differences to the open, disagreements or disputes will build up the tensions between different sides. Instability of emotions, feelings, and behavior could produce sufficient discomfort or even polarization to jeopardize the process of building the common ground on which people think and talk together. In this case, the facilitator could have two strategies: (1) He or she could deliberately steer the team toward the safer territory of controlled and purposeful discussion or redirect the focus on a specific issue away from the "sore

Table 5.4 Ground rules for PAL meetings

Ground rules for PAL meetings
Treat each other as comrades, regardless of rank
Listen to the whole story and participate within the whole, not pieces
Suspend reaction and judgment until you understand
Inquire if you do not understand
Speak out your views, inference, and assumptions
Question your own views, inferences, and assumptions based on the comments from others
Focus on the matter at issue, and take away the human dimension
Stick to using objective criteria
Strive to look for win-win solutions
Do not argue with each other
Be honest, open, and respectful

spots" (Burson 2002). (2) It will be helpful for the facilitator to act like a container to hold the pressures and prevent things from becoming "too hot" (Isaacs 1999). The facilitator could try to stress the common grounds and objectives shared by the different sides, help them to suspend or tone down their outbursts, and identify the alternatives open to them. The tensions can be eased by giving the sides time and space to reflect on their own assumptions and rules, asking them to elaborate their views in a respectful way, and enquiring about their doubts, anxieties, and worries.

Thirdly, while the facilitator can get things moving, he or she must move out of the position of control so that the awareness of the process is owned and shared by everyone (Isaacs 1999). Facilitators wishing to apply dialogue skills in facilitation process will benefit from participating in conversations in which they can themselves work with the building blocks of dialogue theory (Burson 2002). The facilitator can take the advantage of social learning by acting as a role model for team members. He or she should be actively involved, detect ambiguities and deadlocks in the conversation, ask clarifying or probing questions as needed, describe the situation of the dialogue, and summarize the key points that emerged from previous conversation, with the purpose of driving things toward mutual agreement. Besides, team members will be motivated to join in the dialogue, if the team leader takes a lead to reflect on and surface one's own assumptions, inferences, and behaviors.

Fourthly, encouragements and positive feedback, such as encouragement, expression of understanding, smiles, eye contact, and elaborating enquiries, should be given to those practising dialogue skills, such as respectful exploration of others' assumptions and inferences, balancing advocacy with inquiry, making one's own thinking visible, recalling and pondering one's past behaviors, or reflecting on one's thoughts and mistakes.

Last but not least, the facilitator can supplement these with the tools from action science such as "the left-hand column" and "the ladder of inference" (Argyris 1999). They are of most value when a facilitator works with a particular group over time (Burson 2002). Using these tools in the context of PAL meetings will help the team members to understand the mechanisms of their defensive routines. The facilitator should encourage the members to detect and overcome their own defensive routines in group discussion, as they are over protective and anti-learning.

Figure 5.24 gives a diagrammatic view of how the proposed "dialogic interventions" can be introduced into the PAL-driven OL setting typically during PAL review meetings to enable the in-depth dialogue of each PAL team.

5.4.5.3 Provide Training on Team Reflection

This intervention helps PAL members to understand the notion, significance, and method of reflection as an important on-the-job learning approach, which allows them to recap, share, and internalize what they have learned during their PAL projects. Researchers have developed different theoretical models to address the approaches for achieving the critical element in reflection. Mezirow (1991) distinguished three types of reflection based on the object of the reflection itself.

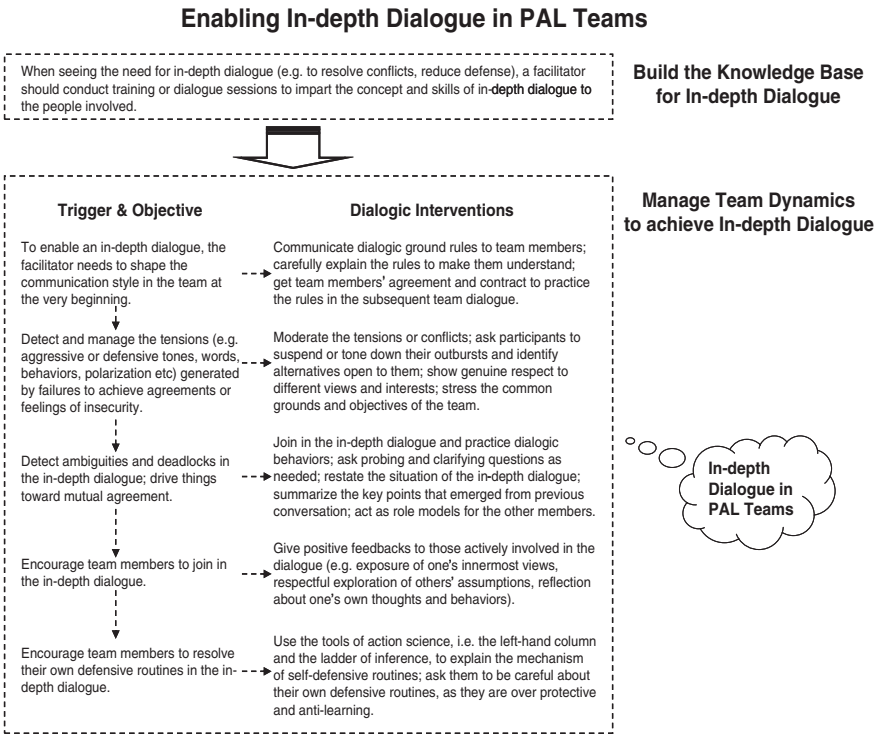

Fig. 5.24 Enabling in-depth dialogue in PAL teams

Content reflection refers to the process of reviewing the way we have consciously analyzed and resolved a problem, whereas process reflection entails an examination of how we go about solving problems in the light of the procedures and assumptions in use. In premise reflection, we question the very questions we have been asking to challenge the fundamental beliefs and assumptions. On the other hand, Hatton and Smith (1995) proposed a four-layer reflection model to describe the conscious process toward critical reflection. In this model, descriptive writing, as the lowest level of reflection, refers to detailed descriptions about what has happened. Then, descriptive reflection involves independent interpretation and analysis of causal mechanisms between behavior and consequences.

Dialogic reflection that incorporates collective attributes requires practitioners to honestly share their reflection about events with others that are involved to achieve the so-called public reflection (Raelin 2001). Finally, in critical reflection, practitioners overtly question their deeply held assumptions, premises, and norms regarding the way they work and solve problems in a wider organizational and social context. It is not hard to see that these models are virtually in line with each other. They just stage reflection processes differently. For example, content reflection is closely associated with both descriptive writing and descriptive reflection.

Process reflection is similar to dialogic reflection, whereas premise reflection involves the characteristics of both dialogic reflection and critical reflection. In

Table 5.5 PAL reflection framework

Reflection level	Relevant PAL themes	Reflection outcomes by asking questions
Level one	Progress review	Recall their PAL topic
		Recall their project performance and learning goals
		Describe their project status quo and the problems
		Describe their current methodology and action plan
		Describe their project progress
Level two	Problem investigation	Interpret the problem
		Explain the methodology used for problem analysis
		Reflect on possible individual mistakes
		Analyze the problem from individuals' perspective
		Interpret and integrate different views, and rethink the causes of the problem systematically
Level three	Problem resolution	Propose and explain possible solutions
		Identify the relevant requirements for competence and resources
		Select the most viable solution
		Construct the action plan
Level four	Project debriefing	Evaluate their project progress or the contributions to both department and organization with concrete evidence
		Evaluate both individual and team learning progresses or achievements with concrete evidence
		Fine-tune PAL goals if needed
		Highlight needs for improvement and future application

this study, we choose to adopt the model from Hatton and Smith (1995) which has been widely used in the field of professional development. For each level of reflection proposed in the model, corresponding PAL-related themes are put forward. The themes for reflection include progress review (descriptions of PAL objectives and project progress), problem investigation (analysis and inquiries of the problem), problem resolution (development of solutions), and project debriefing (generalization and extrapolation of gains). More detailed items are listed in the following Table 5.5 to elaborate the intended reflection outcomes of each level. The training covers all of these.

5.4.5.4 Encourage the use of Team Reflection in PAL Teams

This intervention enables PAL participants to evaluate their project progress and review their learning and capabilities in a structured way by asking them a series of probing and reflective questions. Facilitators or team leaders design the questions with the intention of making PAL participants achieve the reflection outcomes of each level mentioned above. PAL teams are encouraged to explore the answers to these questions through the balanced use of both open discussion and in-depth dialogue, which is facilitated by the facilitator. The whole reflection process is illustrated in Fig. 5.25.

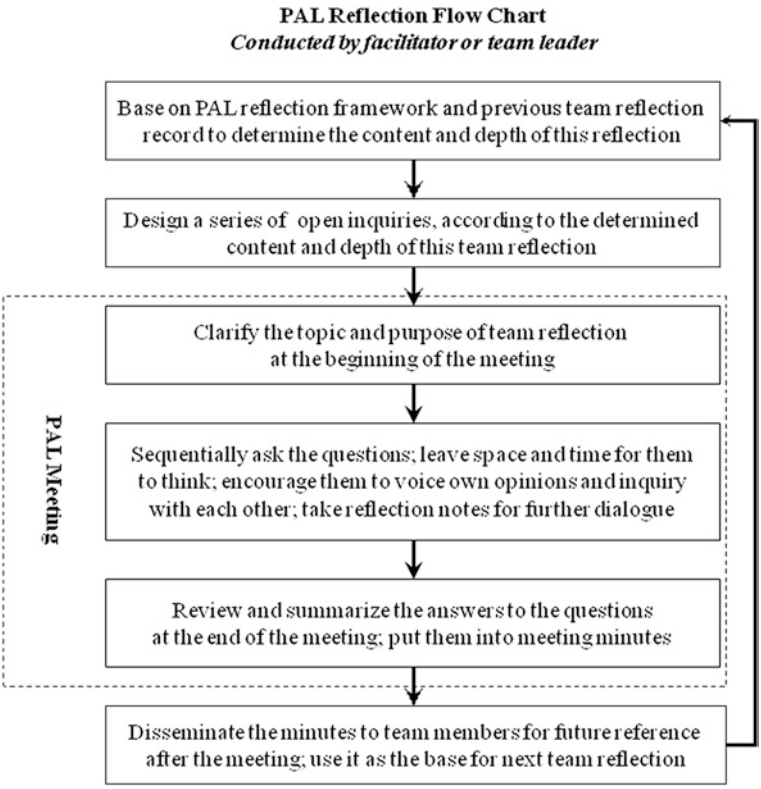

Fig. 5.25 PAL reflection flowchart

5.4.6 Implementation of the PAL Facilitation Model

As a crucial part of this longitudinal study, the implementation of the PAL facilitation model can be divided into three stages, including the pilot test during the preliminary field research, the first round of implementation, and the second round of implementation. Each stage of model implementation was designed and undertaken to achieve different phased objectives for this study. The general schedule and information about the three rounds of model implementation are summarized in Table 5.6.

More details about these rounds of implementation can be found elsewhere (Cao 2011).

The facilitation of OL is different from the facilitation of general group or action learning situations in terms of facilitation context, objectives, and interventions. To put it simply, OL implementation could face the challenges of inadequate learning motivation and poor individual/collective learning capabilities. These barriers become more prominent in organizational setting. Table 5.7 summarizes the uniqueness and contributions of this OL facilitation study.

Table 5.6 General schedule for PAL facilitation model implementation

Rounds	Period	Participants	Phased objectives	Achievements
Pilot test during preliminary field research	Nov 2008–Jan 2009	Five PAL teams participated in this round of implementation. A total of 35 usable paired responses were collected at the start and the end of PAL implementation, respectively	• Test the feasibility of the initially hypothesized PAL facilitation model • Preliminarily examine the effectiveness of the PAL facilitation model • Further develop the facilitation model based on feedback from participants	• Introduced the facilitation model to two PAL teams • Developed an instrument to evaluate the status of PAL implementation • Got promising evidence of the effectiveness of the proposed interventions • Identified the major barriers to introducing the facilitation model
The first round of PAL facilitation model implementation	Sep 2009–Nov 2009	Ten PAL teams were involved in this round of implementation. A total of 68 usable paired responses were collected at the start and the end of PAL implementation, respectively	• Implement the further developed facilitation model to seek consistent evidence • Examine the effectiveness of the PAL facilitation model with a larger scale of samples • Refine the PAL implementation status evaluation instrument based on the larger data set	• Performed a control group study • Further developed the components of the PAL facilitation model and refined the process of introducing the model • Got consistent evidence that gave support to the effectiveness of the facilitation model • Refined the structure and statements of the PAL status evaluation instrument
The second round of PAL facilitation model implementation	Apr 2010–Mar 2011	A wider range of PAL teams were involved in this round of implementation. A total of 95 usable responses were collected during this period of study	• Implement the streamlined facilitation model to a even larger scale of samples • Examine the causal mechanisms between the proposed facilitation interventions and the status of PAL implementation	• Developed an instrument to evaluate the status of PAL facilitation • Got results that statistically supported the casual relationships between the facilitation interventions and PAL implementation status

Table 5.7 The uniqueness and contributions of PAL-driven OL facilitation

Contributions to OL facilitation field	General group facilitation	Action learning facilitation	Facilitation of PAL-driven OL implementation
Facilitation of OL implementation	Facilitate groups to achieve group functions and goals in general group situations, but ineffective in dealing with OL barriers	Facilitate action learning groups to achieve problem solving and learning in general action learning setting, but ineffective in dealing with OL barriers	Demonstrate that OL facilitators can play more proactive roles of LMR and TLE to deal with the OL barriers and enhance the effectiveness of OL implementation
Assessment of facilitation	Only qualitative evaluation	Only qualitative evaluation	Both qualitative and quantitative evaluations
Theoretical development	Propose experiential models (without examination of causal relationships)	Propose experiential models (without examination of causal relationships)	Propose empirical and quantitative model (with examination of causal relationships)

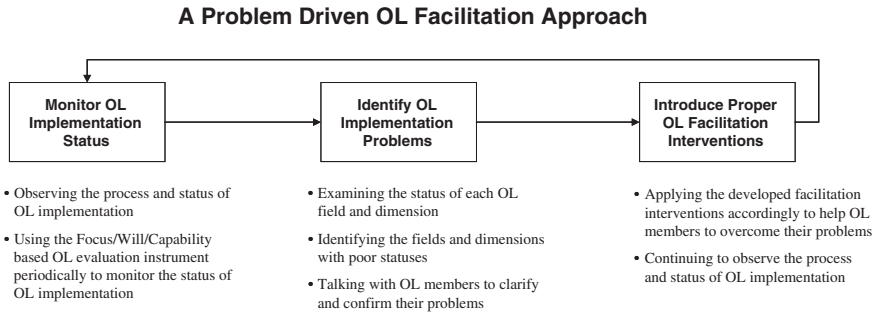

Fig. 5.26 Problem-driven OL facilitation approach

Furthermore, the OL facilitation model has its practical value. It can be applied through a problem-driven approach (see Fig. 5.26), which has been empirically tested in the case company. The results indicate that the proposed roles and facilitation interventions positively influence OL members' learning motivation and team learning capabilities.

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