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**Project-Based Learning in Organizations:  
Towards a Methodology for Learning in Groups**

Running head: Project-Based Learning

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**Abstract**

This article introduces a methodology for employees in organizations to set up and carry out their own group learning projects. It is argued that employees can use project-based learning to make their everyday learning more systematic at times, without necessarily formalizing it. The article emphasizes the specific characteristics that distinguish learning projects from other projects: a focus on the learner rather than the leader, on execution rather than planning, on continuation rather than output, on diversity rather than optimal-solution thinking. Three phases in the creation of a learning project are described: orientation, learning and optimizing, and continuation. Four ideal types of learning project are distinguished: a liberal-contractual, vertical-regulated, horizontal-organic, and external-collegiate type. The various phases and types can be used by employees (plus managers and educators) to create learning projects that fit their specific work situation.

**Keywords**

Project, Learning Project, Project-Based Learning, Learning Groups, Work-Related Learning

## **Project-Based Learning in Organizations: Towards a Methodology for Learning in Groups**

Employees learn continually within organizations. They usually do so unconsciously, informally and incidentally during their work (Marsick & Watkins, 1990; Wenger, 1998). Sometimes this ‘everyday learning’ is made more conscious and efficient, for example, during courses and training. However, it is difficult to approach learning in the workplace informally and more systematically at the same time, particularly if the aim is to connect it with formal and course-based learning. What opportunities do employees have to make their everyday learning more systematic, without necessarily formalizing it? Would organizing such learning programs as group projects offer them fruitful prospects?

The aim of this article is to contribute towards a ‘methodology’ with which group learning projects can be set up and carried out. The starting point of that methodology will be that a wide diversity of learning projects can be created. The basic reasoning underlying the methodology is as follows: Employees will (at particular times) wish to learn more systematically and intensively, with others, as part of their everyday learning. One option, then, is to set up a joint venture with others in order to create a learning project. Such projects would mark a continuation of the ‘normal’ approach of learning during everyday work, while they would also create their own dynamics, resulting from the common efforts of the participants in the learning project.

It is intended in this article first to explain the concept of the ‘learning project’, emphasizing the specific characteristics that distinguish learning projects from other projects. Following that, three phases in learning projects will be described: the orientation phase, the learning phase, and the continuation phase. Since there can be various kinds of learning project, four ‘ideal’ model learning projects will be distinguished. Finally, a methodology for the creation of learning projects will be outlined.

### **Project and Learning Project: Backgrounds and Description of the Concepts**

Systematizing learning in a project makes sense for two reasons. First, the project is an organizational form that is suitable for tasks that cannot easily be implemented within the standing organization. Systematizing learning in a project stimulates participants to discover the unique nature of learning and to realize it requires a unique approach. Working in projects offers the necessary points of departure. The second reason is that organizing projects is to an important extent a human endeavor. That also applies, perhaps even more so, with respect to learning programs. Whereas previously individuals were able to create something on their own (by making choices), nowadays mutual interdependence and interconnectedness have made it necessary for people to go through that process together. Third, projects allow for working in a systematic fashion, while enabling people to develop their own qualities. However, the way in which projects are deployed in practice by their leaders, clients, teams and managers can be problematic as well. This section reviews the key elements of projects and then goes on to examine learning projects.

#### ***Organizing Projects: Between Routine and Improvisation***

Work can be approached in diverse manners, the two extremes being working according to a routine and improvisation. The project-based approach is an intermediate form on a broad scale between improvisation and working according to a routine (Randolph & Posner, 1992, Obeng, 1996; Kliem & Ludin, 1997; Lewis, 2000). In contrast to improvisation, those

involved in projects attempt to increase the predictability of the result and the path towards it. Important tools in this respect are planning and progress monitoring. In contrast to working according to a routine, those involved in projects attempt to adhere to the specific character of an order while acting as flexibly as possible.

There is an inherent tension between the project and the standing organization. The decision to work in the form of a project is taken due to the very fact that the standing organization is not deemed to be properly suited to solving the problem or implementing the concept in question, for whatever reason that may be. Therefore, the culture and structure of the project differ from those of the parent organization. Tensions may arise over the use of resources, priorities, procedures, the influence of managers and project members and other such issues. Those tensions may have positive effects, inspiring and producing dynamism, but they may also lead to obstructive and energy-consuming conflicts. On the other hand, coordination with the standing organization is of great importance, as the results of the project must be put to use within it. For this reason, the involvement of the participants is crucial, both within the project (leader, members, clients) and around the project (financiers, suppliers, a steering group, staff in the department, management). All of these parties have opinions about the project and stakes in it, so they will attempt to bring their influence to bear throughout the various stages of the project.

The following project phases are often distinguished, each phase leading to a concrete document or result:

1. **Initiation:** the concept, problem or challenge is formulated, in consultation between the client and the project leader. This leads to a starting document.
2. **Definition:** the project group works towards a detailed formulation of its ideas and a contract is entered into, with the client and others.
3. **Design and preparation:** a further elaboration of the contract takes place and a detailed plan of action is drawn up for the project.
4. **Execution:** the project plan is executed, which should produce the project result.
5. **Evaluation and follow-up:** attention is focussed on translating the results into permanent changes.

During the above phases, participants work together and interact in order to achieve the result and the essential conditions that they consider necessary. These are not a given, but partly the result of the activities of the project group in interaction with its immediate environment. During the process, participants refine the plans and essential conditions on the basis of the progress of the project. One of the typical characteristics of a project is that express and intensive efforts are made to formulate the results that are being aimed for in as much detail as possible, so that the client's quality requirements can be satisfied. The formulation of detailed results also improves effectiveness and efficiency, and makes it easier for the project team to monitor progress and to refine its plans (Weiss & Wysocki, 1992; Wysocki, Beck, Crane, & Hudson, 2000).

### ***The Specific Nature of Learning Projects***

Systematic learning programs may be viewed as projects and organized as such. In this article, such projects are referred to as learning projects (Poell, 1998; Van der Krogt, 1998). A learning project is:

- a group of participants,
- who want to learn together, systematically,
- about a theme that is relevant for their own development and for their work,
- and who obtain the necessary legitimacy and resources to do so.

A learning project essentially consists of a group of people who cooperate for the duration of a learning program. In most cases they also work together, but it is possible that others may be involved or that the group members will not be working more closely together until some time in the near future. It is crucial that the theme of the project is important for their work and learning; they must be able to see the relevance of the theme for themselves and want to learn about it. That does not mean that the theme has to have the same significance for every member of the group. The group may also consist of members with different views of the theme; for example, superiors and workers may learn together about the planning of their work. Advisers on particular topics and on learning itself may also be part of the group, either for the entire duration of the project or during a particular section of it. In many learning projects, a learning adviser or trainer plays a central role and is appointed by the client as project leader (O'Neil, 2000).

Members of a learning group have the desire to learn together. That is the aim of the project. That does not mean that the members and the leader have clear concepts of their learning goals and learning results from the start of the project. During the project those aspects will be worked on, but the requirements we set must not be too high (Atkinson, 2001). In many organizations, it would be a major step forward if a group of employees were (expressly) to agree that they wished to focus systematically on their own learning in the form of a learning project, and were to recognize that learning does not come of itself.

The subject about which the group members learn must be relevant for them and for the work that is done in their organizations. The project members must develop themselves and at the same time learn about topics that are relevant for their work. The aim is to improve their performance as members of the work organization. Those are broad descriptions of the requirements that are set with respect to the theme and its elaboration. During the course of the project they must be worked out in further detail (Raelin, 1999). In essence this is a matter of project quality, which is an important topic for project teams to deal with explicitly.

In a learning project, attention also focuses on management considerations: time, money, quality, organization, information, and communication. Legitimacy occupies a special position in learning projects. The place and embedding of such projects in the organization and the acceptance and support of the actors need more attention. In many organizations, learning is not a matter of course, and the products and results of learning projects are difficult to establish (Ayas, 1996; DeFillippi, 2001). That is why it is of great importance that relevant parties, both in the learning project and around it, lend their support. The cultural aspects of learning-project creation require very careful study indeed.

### ***Projects and Learning Projects: A Comparative Summary***

Learning projects differ from 'ordinary' projects in a number of ways. The brief overview of literature leads to the following conclusions. First, much attention in literature on projects is devoted to management considerations. That is of course necessary, but for learning projects an equally relevant question is which methods employees deem useful and which adjustments are needed to existing techniques. Second, the project literature focuses heavily on the roles of project leaders and very little on the members of project groups. However, in learning projects, the input of those who are learning is crucial. Third, the emphasis in the literature on projects lies firmly on the project's output. Others, the customers, must be able to work with the results from the project group. In learning projects, however, the members of the project group themselves are the customers, in their capacity as learners. Finally, the project literature takes little account of the diversity that exists in the structure and execution of projects. Learning projects, however, can vary widely from one to another. This is because the composition of the groups varies and learning projects take place in a wide variety of work contexts.

## **The Creation of Learning Projects: Three Phases**

Every project must be set up in phases: the often complicated path must be split into comprehensible parts that can be concluded with concrete results. Many phases are distinguished in project-based work. The preparation or conception phase in particular has been worked out in great detail and divided into a number of sub-phases. In contrast, little is said about the execution phase (see, e.g., Weiss & Wysocki, 1992). With respect to learning projects, a division into three phases will be maintained in order to focus much attention to the execution or learning phase: the orientation phase, the learning phase, and the continuation phase. Why distinguish only three phases in learning projects? The biggest difference between this division into three phases and the divisions maintained generally in the literature lies in the ‘conception’ phases. Activities that relate to initiative, definition, design, and preparation have been combined into the ‘orientation’ phase. There are three reasons to do this.

The first and foremost reason relates to the place of learning projects within a work organization and the specific character of learning projects. A learning project forms part of the continuous learning of people in the organization. A group of learners undertake to focus more intensely and systematically on their individual learning about a certain theme. Normally they would be learning anyway, but during a learning project they do so explicitly and more systematically. The difference between that and the everyday learning must not become too great; a learning project should stimulate the participants to learn continuously during work. The elaboration of the orientation phase into multiple elements would make the project too ‘detached’.

A second reason is that the creation of a learning project is primarily aimed at supporting participants in and around the project and increasing their involvement. The definition of the project and the (psychological) contract for the project are in a relative sense much more important than the planning of it. The participants must form a clear view of what they can do individually and collectively in the project. That requires continual attention, not only during the orientation phase.

A third reason is that learning projects are in the main not extensive, neither in terms of time nor in terms of the size of the learning group. It is unnecessary to have such a strongly differentiated orientation phase, and probably neither efficient nor effective. Those activities can also take place during other phases. The energy of the participants is probably better employed in the learning and continuation phases.

### ***The Orientation Phase: From Idea to Learning Contract***

The orientation phase is about devising a learning-project plan to which the participants are willing and able to commit themselves. The main result of that phase is that the participants can see opportunities for them to make a meaningful contribution to the project. Furthermore, an action plan is drawn up, letting the participants know where they stand, both within the team and in its environment. Others in the organization will then be aware of what happens in the project and can accept it.

The participants in the project devise a project definition, elaborate on it in a project plan and translate it into detailed working arrangements. They make clear to themselves what they want, the opportunities that they see to achieve it, and how the necessary conditions for it can be achieved in the project, acting together with others. The needs and opportunities of individuals are combined with the possibilities to achieve this in the project.

The starting point is a situation where a number of people in a work organization wish to take advantage of the opportunities to learn together about a theme relevant for their work. The activities that must then take place relate to three elements that together must lead to a fourth element, the learning contract.

***Mobilizing the Participants: From Separate Individuals to a Project Group.*** The participants in the project, that is, the team members individually and the team as a whole, reflect upon why they wish to participate in the project, what contribution they can make, and what they are willing and able to learn. The actors must obtain clarity about how their own views (values), possibilities and plans can be accommodated within those of the project team. The result of this reflection is that the participants become clear about what they themselves want in the project and what their input into it can be. On this basis, the organizational structure of the project is put together and arrangements are made concerning the tasks and powers of the team members and other parties involved. The culture of the project team is also 'shaped' to an important extent.

***Analyzing the Learning Theme: From Substantive Theme to Learning Structure.*** The participants make an analysis of the problems and developments in their work and in the organization that led to the choice of theme. That analysis produces a description of the main principles of the learning program and the learning results that the participants should aim for. The substantive structure of the project - the learning activities to be undertaken and how they relate to each other - comes about in that way.

***Contextualizing the Project: Facilitating the Project Conditions.*** The learning project does not take place in a vacuum, but rather within a (work) organization and more specifically, within the broader learning system of the organization in question. Participants in the project must obtain a clear picture of that context, take measures to make connections with the context, and in doing so create the conditions for the project to succeed. Very important elements in this respect are the commitment of other parties in the organization and the opportunities for utilizing existing learning systems. The activities connected with contextualization produce a clear place for the project in the organization and the material and immaterial conditions to allow it to function. The project obtains a clear place in the existing learning system: how does it tie in and what new elements does it add? It is very important that the project has sufficient legitimacy with key parties in the organization.

***Drawing up a Learning Contract: From Interest to Arrangements.*** Working on the above three aspects together must combine to produce a learning contract: a plan that the participants involved consider to be feasible. The learning contract contains:

- the agreement of the participants, who consider themselves bound to the plan;
- arrangements on the content and organization structure of the project;
- arrangements on the place of the learning project in the (standing) organization.

It will be obvious that those activities run parallel with each other and/or concur to an important extent. It is crucial that the participants in and around the project support its creation and are willing and able to play their roles in the project as a whole. That is why their participation in the substantive and contextual analysis is so important: it allows them to specify their own views and possibilities and to place them within the project.

### ***The Learning Phase: From a Contract to Learning Results***

During the orientation phase, the participants will have developed ideas about the form of the project and what they could learn. The internal and external participants will have developed a picture of the content and organization of the project and they will have declared themselves to be willing to devote themselves to implementing it. Moreover, an initial elaboration of ideas will have taken place, in the form of broad arrangements about what they will learn and how, the tasks and responsibilities of those involved, and the procedures that they will follow. During the learning phase, the participants put those ideas and plans into practice. However, that does not mean that once a plan for a learning project has been devised, it must be followed precisely as planned. The learning phase essentially consists of the execution and optimization of the learning project. The participants begin with one section of the learning

project (e.g., workplace training, a course, or an experimental change in their working practices). They discuss their experiences together and on that basis a following section of the learning project is carried out. Execution and optimization take place continually. The trick is to coordinate the two activities as closely as possible with each other, and where possible to integrate them.

***Executing the Learning Project: Learning in Interaction.*** The members of the project group create the program as they carry it out. They undertake learning activities with each other and in doing so develop ideas about their work and expertise. They reflect upon their work, give each other feedback, conduct discussions, develop new ideas, experiment during their work, participate in training or in a course, take part in role-playing, and so forth. The key to learning results is that those who are learning perceive that they are making progress, that they learn to place experiences and to assign meaning to them, so that they can conduct themselves differently in their work.

***Optimizing the Learning Project: Quality Control.*** During the learning phase, the participants regularly examine how the learning activities are progressing, how the procedures that were agreed are being followed, and the extent to which the intended learning results are being achieved. That leads the participants to refine the program, to develop new ideas together, and to make new arrangements. The learning program consists of various sections, that is, learning situations. Workplace and course-based learning are the main components, which are used in combination with each other. Experiences with learning in such learning situations may give cause to refine the program. The team continues to monitor its progress in the program and may make choices from the options that are available. New learning situations may have to be designed (e.g., training or role-playing) relating to a specific point.

The organization of the project team may also be changed. The opinions and views that the team members have about the project are just as important for achieving their learning results. During the execution of the project, those views become more detailed and will be adjusted in view of their experiences. The participants obtain a clearer picture of their roles in the project and the ways in which they can learn in this joint venture.

The quality of the learning project concerns three criteria: the learning views of the participants, their work views, and its relevance for their work. Each of the participants in the project will have their own interpretation of those criteria. In optimizing the learning project, it is of central importance that the participants obtain a clear idea of those three criteria and can improve the learning project in those respects.

A distinction has been maintained here between execution and optimization, but the trick is actually to connect the two: to build on experiences in execution and use them to optimize the quality of the learning process and the learning program.

### ***Continuation Phase: From Results to Permanent Effects***

The continuation phase is aimed at making explicit the learning experiences that have been gained during the project and ‘building them into’ the participants, into their everyday learning, and into the learning system of the organization, so that those experiences can be useful over the long term. The experiences gained during the project and the results of it only produce long lasting effects if they are ingrained into people, everyday learning, and organizational learning systems.

The learning project is a temporary ‘joint learning venture’ aimed at learning about a work-related theme. However, that learning does not cease once the project finishes; everyday learning by the members of the project group goes on. Ideas and plans are developed at the end of the learning project, in the continuation phase, in order to allow them to continue in an optimal fashion. After the project ends, the team members and external parties must be stimulated to follow-up on their learning in other ventures (in part with different people).

***Giving Fresh Impetus to Everyday Learning.*** During the project, the team members have learned about a work-related theme and about their roles and strategies in the learning project. In the continuation phase, their new knowledge about work and learning is made explicit and adopted in follow-up activities. That may take the form of a personal learning plan or of workplace learning. For the team members, the learning project forms part of their personal learning plans. During the orientation phase, they have seen the extent to which their participation in the project ties in with their individual learning plans. During the continuation phase, that relationship is reassessed: what are the consequences of their experiences during the project for their personal learning plans? Two aspects are important in this connection. First, the team members examine what they have learned and in which respects they can build upon it during the remainder of the (workplace) learning plan. Should they, for example, give priority to other topics? Second, besides matters of content, their learning methods may also come under examination. Experiences gained during the learning project may for example prompt group members to make more time available for private study or to set up a study group with a few other team members.

***Improving the Organizational Learning System.*** There are various ways to systematize the learning experiences gained during the learning project, to allocate them between the participants, and to adopt them into the learning system. The most productive way is for the participants in the learning project to communicate, consult, and cooperate with other actors in the learning system. That may take the form of allowing them to participate in new learning projects (as adviser, member, coach) or involving them in the preparation of learning policies. A second way is to arrange and systematize the learning materials made available by the learning project. During the project, new materials will usually have been developed or existing materials will have been adapted (e.g., study assignments, work assignments, tests, and reports). In many cases, more clarity is also obtained during the project about the roles and responsibilities of the team participants, such as the team leader, learning adviser, line manager, and coach. A third possibility is to bring the present (implicit) knowledge that the participants have to expression, by means of interviews, group discussions, or surveys. That can also take place in combination with an analysis of the project records and minutes of meetings of the project team. Much can also be learned from the measures that were considered with respect to optimizing the learning project. Finally, comparing various learning projects can provide new insights into how learning projects can be set up and executed, as well.

### ***How Normative and Prescriptive Is this Model?***

Describing three phases in learning projects, like we have done above, can lead to the impression that every single learning project needs to be run in that systematic fashion. This, however, is not our contention, even though we believe the model can inspire people to organize learning projects in a more systematic way than they are used to doing. It is not our aim to tell learners which steps they should be taking in order to engage in project-based learning. Rather, in describing the various sub-phases that in our view make up a learning project we hope to trigger learners to pay some more explicit attention to certain activities they would not normally think of doing.

For example, while the orientation phase has gained a lot of attention in literature (e.g., Romiszowski, 1982; Robinson & Robinson, 1989; Kessels, 1993), the actual execution of the learning project, its optimization and its continuation have drawn significantly less attention so far. Apparently it is assumed that once a project has been designed, its execution is a matter of following the procedures laid down on beforehand. This, however, is not how learning in an organizational context works. No matter how well a project has been designed, during its execution expected and unexpected changes occur in the organization, in the project context,

in the perceptions and interests of learners, and so forth, that have to be taken into account throughout (Kessels, 1999).

The issue of optimizing a learning project during its execution is not often encountered in literature, although the much more general notion of continuous improvement has been rather popular in the last decade (cf. De Lange-Ros, 1999). The learning-project model pays specific and concrete attention to the question how optimization can be encouraged. As far as continuation of learning is concerned, the most obvious references are to the transfer-of-training literature and to ideas around personal development planning. The notion of training transfer (e.g., Broad & Newstrom, 1992) assumes a gap between what people learn in a training course and its application in the workplace. The concept of personal development planning (e.g., Morgan, 2002) also tends to focus on rather formal training situations for development to take place. Both approaches do not regard learning as an ongoing process owned by the learner and taking place mainly in unstructured and work-based contexts. Thinking in terms of learning projects allows for a systematization of the ongoing learning process to a certain extent for a certain period of time.

Systematization, however, should not be taken to equal formalization. The power of informal and incidental learning (Marsick & Watkins, 1990) would dissolve if it were to be fully replaced by formalized pre-structured arrangements. Systematization means becoming more explicitly aware of the opportunities for learning offered by work situations, so that these are actively sought and may become part of one's learning process. Rather than prescribing what to do in what order, the learning-project model drives on the assumption that in practice all its phases and sub-phases may be conducted to a more or less systematic degree. It wants to help learners (and their supervisors and educators) to become aware of ways in which their ongoing learning process can be stimulated. Moreover, it does not assume that one type of learning project provides the best solution for every group. Rather, different learning-project types may be used depending on the work context and the preferences of the actors involved. Four ideal types will be described briefly in the remainder of this paper.

### **Four Ideal Types of Learning Project**

In the above, the basic outline of a methodology for the creation of learning projects has been presented. However, groups within organizations have various possible ways available, along these general lines, to create very different kinds of learning project. In the following, four ideal models will be distinguished, meaning theoretically based, diverse types of learning project:

- the liberal, contractual learning project;
- the vertical, regulated learning project;
- the horizontal, organic learning project;
- the external, collegiate learning project.

This typology has been derived from Van der Krogt (1998) and Poell (1998). A full elaboration of the four types is available in Poell & Van der Krogt (2002).

#### ***The Liberal, Contractual Learning Project***

The individual responsibility of the members themselves is central to the liberal, contractual learning project. They draw up their own program of learning activities, more explicitly than they normally learn, and utilize the opportunities that the broader framework of the learning group offers them. The individual participants negotiate with each other and with their superiors about the program. A contract is agreed setting out in particular arrangements about the results that are expected, as well as arrangements concerning facilities (such as time,

money, and support). Individual participants can call each other to account over whether or not they achieve the expected learning results and with regard to the support that they have agreed to offer each other in their efforts.

The liberal, contractual type of learning project is very much informed by the self-directed learning ability of individual group members (Brookfield, 1986). Each individual member uses the team context to facilitate and enrich their own learning process, for which they are self-responsible (Candy, 1991). In our idea of the liberal learning model, however, more focus is placed on optimisation and continuation of the learning, compared to these authors.

### ***The Vertical, Regulated Learning Project***

In the vertical, regulated learning project, educators and other experts, in consultation with line managers, play a crucial role in the preparation, execution, and evaluation of the activities of the learning group. Much value is attached to careful planning on the basis of policy intentions and requirements-analyses. That is carried out by the educator and the experts beforehand, who allow themselves to be influenced in their planning by the possibilities and wishes of the learning employees.

In the vertical, regulated type of learning project distinct overtones can be traced of the training-for-impact approach taken by Robinson and Robinson (1989) and the notions about structured on-the-job training of Jacobs and Jones (1995). A highly pre-structured way to organize formal off-the-job learning is supplemented here with transfer enhancing measures (Broad & Newstrom, 1992). The vertical model presented above, however, views learning and transfer activities as related elements in one coherent learning program, whereas other authors tend to emphasize the gaps between formal training by the educator and on-the-job application by the employees.

### ***The Horizontal, Organic Learning Project***

In the horizontal, organic learning project, learners work together as a relatively autonomous team, assisted by a process supervisor, in solving complex work-related problems to which there is no standard approach. The members of the learning group often have an extremely diverse range of expertise that must be gathered together in order to devise new creative ideas or solutions. If superiors are involved, they operate in a relationship of equality with the learners or function (in part) as process supervisors. Working as a team in an organic way towards a common product, with a joint mission and aim, is crucial in this respect. This organic method of learning may well be very similar to the participants' everyday work, but in the context of a learning project those participants are more consciously occupied than they usually would be with making that learning explicit.

In the horizontal, organic type of learning project the early work on organizational learning by Argyris and Schön (1978) is a key reference point. The notion of organic organizations became very popular in the 1990s through Senge's (1990) work on learning organizations. More recently, literature on communities of practice (Wenger, 1998) seems to draw rather heavily on this type of learning. These authors all focus on integrating learning with daily work, whereas the horizontal learning model emphasizes also collaborative every-day problem solving as an unstructured learning opportunity.

### ***The External, Collegiate Learning Project***

In the external, collegiate learning project, a learning group of professionals allows itself to be inspired by innovative insights and new methodologies developed within their own professional branch but outside their own individual organizations. The participants often come from several professional organizations and together with fellow professionals they familiarize themselves with professional knowledge, insights, norms and codes that apply

within their own professions. Through the learning project, they adjust their manner of working in the light of new, scientifically based techniques, that institutions for training and further education pass on to members of their profession.

The external, collegiate type of learning project assumes professionals are reflective learners (Schön, 1983), in need of continual expertise development within their professional peer group (Daley, 1999). However, the external learning model pays more attention than the continuing professional development literature does to the ways in which professionals appropriate new scientific methods and incorporate these in their daily work routine.

### ***How the Four Learning-Project Types Differ***

The orientation, learning, and continuation phases in the four model learning projects differ considerably. Although the kind of activities that participants in the learning projects carry out in the three phases are the same in all four models, the specific way in which they are elaborated differs widely from model to model. In the *liberal* model, the individual learners are the dominant actors. They maintain exchange relations with their superiors and the project supervisor; they also involve others in shaping their own learning program, in as far as it can enrich their own learning paths. In the *vertical* model, the educator and superiors are the dominant party; they devise the learning program for the project group, in the context of strictly regulated relationships with the management and representatives of the employees. In the *horizontal* model, the learning project group, a relatively autonomous group, is dominant. All of the parties involved work in relationships of equality towards solving complex work-related problems. On their way they create the learning project organically and each of them learns in this group context. Finally, in the *external* model learning project, the dominant party is the professional association outside the individual organization; professional and collegiate relationships prevail. The learning project largely takes place externally. Following it, professionals from various organizations adjust their working methodologies to their newly gained insights.

### **Towards a Methodology for the Creation of Learning Projects**

The essential difference between the four models lies in the way in which the participants in the learning group give shape to and further develop their relationships with each other. The choices they make have far reaching consequences for the substantive profile and course of the learning project. The central question then becomes how social groupings should be organized between people to optimize the way in which individuals learn. If insufficient attention is paid to that question (by educators, superiors, learners, the professional association, and others) it is likely that the normal learning paths of the members of the organization will correspond strongly with the way in which their daily work is organized. And that will often be undesirable, if the aim is to ensure the development of people and organizations. In other words, one important key to development is to focus specific attention on shaping the relationships between the participants in the learning project (differently). That brings us back to the earlier argument in favor of 'removing' learning from its everyday context, by organizing it in project form. At the same time, it is very important to this methodology to take proper account of the possibilities and limitations that the existing context presents to participants in learning projects.

The learning-project framework has been used to study the process of learning program creation by Van der Krogt (1998) and Poell (1998), including practical cases of the models presented. For example, Poell, Tijmenssen & Van der Krogt (1998) described two learning-project cases in professional organizations aspiring to become learning organizations. The

framework has also been applied in the context of peer consultation (Driehuis, 1997), integral organization renewal (Hoogerwerf, 1998), workplace training (Harris, Simons & Bone, 2000), project learning (Pluijmen, 2001), and public administration (Mick, 2001). The models can first of all be used to analyze, describe and explain the process of learning program creation in organizational contexts (Poell, Chivers, Van der Krogt & Wildemeersch, 2000). Moreover, they can provide educators, learners and managers with ideas and alternatives to create learning programs in their own organizational practice (e.g., Pluijmen, 2001). For instance, a recent project brought educators and researchers together to reflect on the learning-project strategies deployed by the educators (Poell & Van der Krogt, in preparation). Through discussion using the learning-project models, educators became aware of the strategies they and their colleagues used implicitly, opening up alternative routes to one another from their own practice and from the ideal types presented by the researchers. The project also enabled educators to experiment with new ways of organizing a learning-project and receive feedback from colleagues and researchers.

The methodology described in this article could thus help groups to create learning projects in various ways. The general part, contained in the middle section, sets out the basic elements that a learning group must focus its attention on. Questions that the participants must pose themselves in this respect were presented in three phases: the orientation phase, the learning phase, and the continuation phase. The four models set out in the latter section can be regarded as extreme examples of how learning projects can be set up. They can help groups to become aware of the way(s) in which they normally learn, and the possible differences in this respect amongst individuals, teams, departments, and organizations. They can also serve as models to aspire to, or as tools to facilitate the discussion about this amongst those involved. Finally, the models may also be used as diagnostic instruments to chart the developments that take place in learning over time.

Crucial to this is of course the realization that groups have different degrees of freedom to determine and to change the social groupings within which people learn together. The methodology presented here may serve as a tool to give groups insight into the various opportunities available to them in this area.

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