

Does HRD Effectiveness Vary for Organization and HRD Related Factors?

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This study examines whether certain contextual conditions influence the effectiveness of HRD programs and activities. Stakeholders of two types of HRD programs who were also from companies in two economic sectors were asked to complete a questionnaire. No differences in perceived effectiveness was observed for the factors size and structure of the company, economic sector, structure of the HRD function and transfer conditions. Significant differences were found for the problem that serves as starting point for HRD, company HRD climate, position of the HRD department, and the form the HRD program takes.

Keywords: HRD Effectiveness, Contextual Characteristics, Multi-level Analysis

HRD programs and other learning interventions take place within the context of the company for which they are intended. According to contingency theory it is often assumed that there is a close link between characteristics of this context and the way in which organizational processes evolve. Deviating from an appropriate model, contingency theorists maintain, creates a lower degree of organizational effectiveness (Khandwalla, 1977; Van de Ven & Drazin, 1985). Literature indicates a number of contextual characteristics influencing organizational structures and processes. If these are not aligned with their contextual characteristics, a lower degree of organizational effectiveness is expected. Roth (1992), for instance, found that organizational effectiveness increased when decision-making characteristics were aligned more adequately with the (international) strategy of a company. Based on the aforementioned, it is assumed there will be less HRD effectiveness if HRD structures and processes do not match their contextual conditions. The question is, which contextual factors are important for achieving HRD effectiveness.

Theoretical Framework

Literature and earlier research (Wognum, 1998) indicate a number of contextual characteristics influence organizational structures and processes. These are usually divided into two categories: organizational factors and company environment (Mintzberg, 1983; Tjepkema & Wognum, 1999). Considering the HRD perspective, these characteristics refer to the organization of the HRD function, which is usually in the form of an HRD department, and to the environment of the HRD function, which can be divided into two parts: the company in which the HRD function is embedded, and the company's external environment the so-called macro-environment (Figure 1).

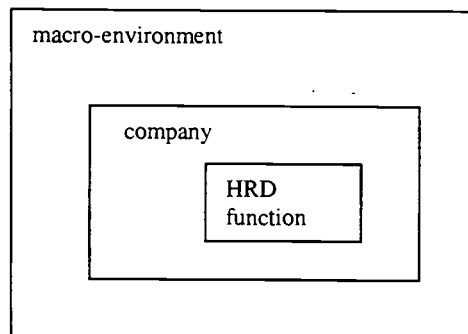


Figure 1: *the context of the HRD function*

Characteristic of the Macro-Environment

The macro-environment consists of all forces which affect the company, such as demographic, social, economic, ecological, technological, political and cultural. Some of these forces have a direct or indirect impact on the HRD function (American Society for training and development, 1994). The ever-increasing trend toward automation, robotics, and other advanced computer applications, for example, requires workers with sophisticated competencies. The HRD function is obliged to deliver HRD programs which provide these workers with the required skills. Technological modifications and changes in product-market relations urge companies to train and develop their employees (Pettigrew c.s. in Garavan, 1991). These examples make it clear, that the macro-environment context will be reflected in the kind of problems or developments with which the company is faced. Such problems are starting points for HRD interventions so that employees can obtain the necessary knowledge, skills, and attitudes needed. Therefore, macro-environment characteristics are not a direct object of study but act more indirectly by considering the problem that serves as a starting point for HRD interventions. This problem can be conceived as a characteristic of the company.

Characteristics of the Company

Besides the aforementioned problem characteristic, other company related factors which may have an impact on company processes and the HRD function (Mintzberg, 1983, Tjepkema & Wognum, 1999) include the economic sector of the company, its size, structure, HRD climate and the degree of company innovation.

The economic sector is a characteristic which refers to a group of organizations producing the same kind of product or delivering the same type of service, i.e. agriculture, transportation and communication, retail and wholesale trade, insurance or service providing organizations. The economic sector characterizes the kind and complexity of a company's core processes and, by that, the core competencies needed. This affects company HRD policy processes. In certain sectors (e.g. construction) companies hardly offer any HRD activities, while in other sectors companies are extremely active in this field (e.g. insurance) (Wognum, 1998).

The size of the company influences company processes. In large companies these processes are much more formalized than in smaller ones (Mintzberg, 1983). It has been shown that in companies with more than 500 employees a more explicit training policy is formulated and drawn-up than in smaller companies (Mulder, Akkerman & Bentvelsen, 1989). Also a strong coherence was found between the size of the company and the level of HRD activities: the larger the company, the more HRD interventions were found (Centraal Bureau voor de Statistiek, 1995). Large companies often need other skills and attitudes than smaller companies. For example, companies with more than 1,000 employees seem to offer significantly more programs on marketing skills than companies with less than 100 employees (Wognum, 1998).

With regard to the structure of the company, the degree of organizational (de)centralization greatly exerts influence on company processes (Koopman & Pool, 1992), and including the HRD function. For instance, it influences the choice of target groups attending HRD programs, and the choice for the content of HRD intervention. Centralized companies typically offer fewer HRD activities for top management than companies with decentralized structures (Wognum, 1998). The level of (de)centralization also affects the way in which the HRD function is organized. In decentralized companies it is common to divide HRD responsibilities over a central HRD department (located at the central staff), and among several decentralized HRD officers or trainers (Wexley and Latham, 1991).

The company's HRD climate relates to the visible characteristics of HRD corporate culture (Wexley & Latham, 1991). Bates, Holton, and Seyler (1997) demonstrated the importance of introducing the climate factor into the HRD transfer study. The attitude of managers towards training, which is an important aspect of corporate HRD climate (Ford & Noe, 1987; Wexley & Latham, 1991), may affect their involvement in HRD activities or the opportunity they create for assessing training needs at all organizational levels. Their attitudes affect the level of investment in HRD interventions (Rothwell & Kazenas, 1989; Garavan, Barnicle & Heraty, 1993), and their willingness to consult with others on HRD issues (Kessels, 1993).

The degree of innovation within the company is another important contextual factor. Hall & Goodale (1986) point to a company's stage of organizational development as an important characteristic for HRD participation. By that is also meant the emphasis is on the degree of company innovation. For instance, companies with a lot of changes in work processes invest more in the development of their employees than companies which do not change their work processes (Useem, 1993).

Characteristics of the HRD Function.

HRD related factors which are seen as important for the HRD function include structure and position of the HRD department, degree of innovation within the HRD department, and the form the HRD program takes.

Based on Mintzberg (1983), it is assumed that structure and position of the HRD department (central or decentralized, staff or line), indicate where and by whom HRD decisions are made and what possibilities a company has for delivering effective HRD interventions as well as the focus of the HRD function (London, 1989). A decentralized department often works for the unit in which it is located - in many cases the operating core. A centralized department focuses on the overall organization, with top and middle management as target groups.

Following the foregoing reasoning, the degree of innovation of the HRD department is an important characteristic which will probably have an impact on its functioning and results.

The form the HRD program takes is one of the factors one has to account for when designing an HRD intervention. It depends on the kind of organizational problems the HRD department faces whether the program is tailored or customized program for a specific company, or a standard or other 'off-the-shelf' program, suitable for every company and problem situation.

Even though the form or quality of the HRD program may be good, it does not mean participants are able to transfer acquired knowledge and skills to their working situation. In other words, arrangements - the so-called transfer conditions - have to be made in order that employees apply the learned competences to the workplace (Thijssen & Den Ouden, 1995).

Organization and HRD Related Factors and their Impact on HRD Effectiveness

The aforementioned organization and HRD related characteristics, represented in Table 1, are expected to have an impact on HRD effectiveness. This is conceived as the extent to which HRD goals and objectives are achieved. In order to define the level of effectiveness, HRD effects can be measured at learning (effect on knowledge, skills and attitudes), behavior (effect on job behavior of individual employees) and results levels (effect on the performance results of groups, departments or the company) (Kirkpatrick, 1994).

Table 1: *Organization and HRD related factors by which the impact on HRD effectiveness will be explored*

Organization related factors	HRD related factors
Problem that serves as starting point for HRD	Structure and position of the HRD department
Economic sector	Degree of innovation of the HRD department
Size and structure of the company	Form the HRD program takes
Degree of innovation of the company	Transfer conditions
Company HRD climate	

Research Question

To create effective HRD interventions it is important to investigate which contextual factors have an impact on the effectiveness of corporate HRD programs and other learning activities, and to what extent. In other words: to what extent does HRD effectiveness vary for organization and HRD related factors, as represented in Table 1?

Methods

The survey reported here was carried out as part of a larger one among Dutch companies (Wognum, 1999). These were selected from a national database from the Association of Chambers of Commerce.

Sample. Two company related factors were used as selection criteria: size of the company and its economic sector. Following this criteria, 44 companies with more than 500 employees were selected from the aforementioned database: 11 from the industrial sector and 33 from the financial and commercial services sector. A non-response analysis showed no significant differences between the non-response group and the 44 companies in the study, concerning such contextual variables as size and structure of the company and structure and position of the HRD function. In each company one HRD program was selected (from the two frequently recurring fields of automation and social skills). This resulted in 23 selecting automation and 21 social skills programs. In order to define the effectiveness of the selected HRD programs, four categories of respondents within the company were selected: the

HRD company representative, a maximum of 15 HRD participants, their supervising manager and (if present) their subordinates. All groups can be considered as having an interest in the results of the HRD programs (so-called stakeholders).

Data collection. Data were collected in the spring and summer of 1997 using a questionnaire sent to 767 representatives of the four groups of stakeholders (44 HRD company representatives, 357 HRD participants, 242 supervising managers and 124 subordinates). The questionnaire was designed to collect information on the aforementioned contextual factors and HRD effectiveness. In order to compare the effects of the 44 HRD programs at the three identified effect levels, the perceived effectiveness by respondents was the object of study instead of the real effectiveness. This is based on the assumption that the importance given to effectiveness later is every bit as important as actual HRD effectiveness (Ford & Noe, 1987). Statements on the achieved effects of the selected HRD programs had answers on a five-point scale, running from 1 (totally disagree/not at all) to 5 (totally agree/completely) and a possible 6 score (for unknown, no idea, or not relevant).

Additional questions in the questionnaire for HRD company representatives concerned the company itself and HRD related factors. These included questions on the kind of problem that was a starting point for HRD (divided into three categories: to resolve a problem concerning employee, department or company performance; to improve certain working practices; or to change or renew the company situation), on the structure of the company and HRD function, on important innovations occurring since 1990 within the company as well as in the HRD function, on the design of the selected program, and on conditions made for transferring of the learning results into working practice. The questions had both pre-coded and open answers. Twelve statements focused on company HRD climate and comprised, among others, statements on a respondent's perception of management attitude towards training. These statements also had answers on a five-point scale.

Response. 752 questionnaires were sent to the automation group (23 HRD company representatives, 320 trainees, 277 managers, and 132 subordinates). All 23 HRD company representatives completed the questionnaire, while 54% of trainees, 43% of managers, and 29% of subordinates responded. 740 questionnaires were sent to the 'social skills' group (21 HRD company representatives, 292 trainees, 251 managers, and 176 subordinates). All HRD representatives completed the questionnaire, while 63% of trainees, 49% of managers, and 49% of subordinates responded. The final group of respondents in this study had a sample size of 44 HRD company representatives, 357 HRD participants, 242 supervising managers and 124 subordinates. Although the response group may not be fully representative for all respondents within those companies, this may not be troublesome, since this study focuses on correlations between variables (Zetterberg, 1963).

Analysis. The two-stage sampling design (first a sample of companies, then a sample of respondents within each company) resulted in a hierarchical, nested data structure. Multilevel statistical models (cf. Goldstein, Rasbach, Plewis, et al, 1998) are suitable for handling data with such a structure. Unlike obvious techniques such as analysis of covariance or regression analysis, these multilevel statistical models allow statistical inferences both at individual respondent (sample size 767) and company (sample size 44) levels. Using these models it is possible to distinguish between within and between company relationships between variables. A one-factor analysis was used to assess the construct validity of two scales. From the scale 'company HRD climate', one item with factor loading below .40 was dropped for further analysis. Reliability of the remaining 11 items of this scale led to an alpha of .72 ($M=4.03$, $SD=.45$). Reliability of the nine items of the scale perceived led to an alpha of .89 ($M=3.52$, $SD=.70$).

The analysis is built on earlier findings on the impact of strategic HRD aligning, which is a key concept of HRD policymaking, on perceived HRD effectiveness (Wognum & Bosker, 1998, Wognum, 1999). It was then proved that strategic HRD aligning within companies has a positive effect on perceived HRD effectiveness of .47, and within companies a comparable effect of .49. Respondents' opinion on the quality of this aligning process even accounts for 22% of the variance in the HRD effectiveness score (see model 2 in Table 2). Model 2 turned out to be the best fitting model to explain this effect on perceived HRD effectiveness (Wognum, 1999).

Results

For exploring the impact of organization and HRD related factors, the variables size and structure of the company, degree of innovation of the company, structure and position of the HRD department, degree of innovation of the HRD department, design of HRD programs, conditions made for the transfer of learning results, and company HRD climate are separately brought into Model 2. The results of these analyses per factor are discussed below and presented in Tables 2, 3 and 4. Only the significant results are presented. The variable economic sector only served as a selection criterium. It was not brought into the analysis since no significant effect on perceived HRD effectiveness was found concerning this characteristic (Wognum, 1999). For the factors size and structure of the

organization, structure of the HRD function, and transfer conditions, no differences in perceived HRD effectiveness were observed. A link was found, however, between the following organization and HRD related factors and perceived HRD effectiveness.

Problem that Served as Starting Point for HRD

It was found that the problem that served as starting point for HRD has no significant effect on perceived HRD effectiveness in itself (Table 2, Model 3a).

Table 2: *Effects (and standard errors) of the problem that served as starting point for HRD, and of the interaction of this problem and type of HRD program, on perceived HRD effectiveness (number of respondents = 440; number of companies = 44)*

	model 2	model 3a	model 4
intercept	1.83 (.16)	1.80 (.17)	1.91 (.17)
supervising managers	-.05 (.06)	-.05 (.06)	-.04 (.06)
subordinates	.14 (.11)	.14 (.11)	.16 (.11)
HRD company representatives	-.03 (.12)	-.09 (.13)	-.07 (.13)
strategic aligning within companies	.49 (.05)**	.51 (.05)**	.52 (.05)**
strategic aligning between companies	.47 (.19)**	.47 (.20)**	.50 (.17)**
type of HRD program ^{a)}			-.32 (.13)
change/renew comp. situation (contrastgroup)		-	-
resolve actual problems		-.10 (.18)	.20 (.24)
improve working practices		-.11 (.07)	-.08 (.09)
HRD program*resolve actual problems			-.64 (.35)*
HRD program*improve working practices			.03 (.14)
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unexplained variance			
between companies	.075 (.02)	.076 (.02)	.048 (.02)
within companies	.304 (.02)	.287 (.02)	.285 (.02)
explained variance R ²	22%	25%	31%
deviance	776.413	665.369	650.818

a) automation programs (as contrast group) versus social skills programs

*) significant at $\alpha < .10$ (two-tailed)

**) significant at $\alpha < .10$ (one-tailed)

In interaction with the type of HRD program (automation or social skills) the problem that served as starting point for HRD proved to have a positive effect on perceived HRD effectiveness. If the actual performance of employees, departments or the entire company is starting point for HRD interventions, then the impact on perceived HRD effectiveness was .20 in the case of automation programs (see Model 4 in Table 2). For social skills programs this effect was then .64 lower, which is significant. This interaction effect explains 6% of unique variance in HRD effectiveness.

HRD Climate and Position of the HRD Department

The data in Model 3b (see Table 3) show that the effect of the HRD climate on perceived HRD effectiveness was -.19 (significant), meaning that HRD climate correlates negatively with HRD effectiveness. This factor explains 1% extra variation in perceived HRD effectiveness. No interaction effects were found between HRD climate and type of HRD program, indicating that the effect of HRD climate on perceived effectiveness is negative, regardless whether it concerns automation or social skills programs.

The same applies to the position of the HRD department when this is not placed in the management line, but is part of a staff department, for instance, the company's personnel department (see Model 3c in Table 3). The data indicate that the effect on perceived HRD effectiveness is .40 lower where the HRD department is part of a staff department, than when it has 'other position than a staff department', which is significant. Through this factor the variation in the perceived HRD effectiveness score was explained for 5% more. No interaction effect between 'position of the HRD department' and 'type of HRD program' were found, implying that the perceived HRD effectiveness score in companies with an HRD department as part of a staff department is significantly lower than in

companies with an HRD department positioned as other than a staff department, no matter if it concerns automation or social skills programs.

Table 3: Effects (and standard errors) of the HRD climate and position of the HRD department on perceived HRD effectiveness (with 'other position than a staff department' as contrast group) (number of respondents = 440; number of companies = 44)

	model 2	model 3b	model 3c
intercept	1.83 (.16)	2.61 (.49)	1.92 (.16)
supervising managers	-.05 (.06)	-.05 (.06)	-.05 (.06)
subordinates	.14 (.11)	.13 (.11)	.13 (.11)
HRD company representatives	-.03 (.12)	-.02 (.12)	-.04 (.12)
strategic aligning within companies	.49 (.05)**	.48 (.05)**	.49 (.05)**
strategic aligning between companies	.47 (.19)**	.52 (.19)**	.42 (.16)**
HRD climate		-.19 (.11)*	
position as part of a staff department			-.40 (.11)**
unexplained variance			
between companies	.075 (.02)	.066 (.02)	.045 (.02)
within companies	.304 (.02)	.304 (.02)	.305 (.02)
explained variance R ²	22%	23%	28%
deviance	776.413	773.727	763.607

*) significant at $\alpha < .10$ (two-tailed)

**) significant at $\alpha < .10$ (one-tailed)

The Form the HRD Program Takes

More than 56% of the 44 HRD programs studied were tailor-made, 25% were standard, while about 18% had another form, usually an adaptation of a standard program to a specific company situation. The data in Table 4 indicate that the form of the HRD program correlates negatively with perceived HRD effectiveness. When compared to standard and other kind of 'off-the-shelf' programs, tailor-made or customized programs result in a lower level of effectiveness (regression coefficient = $-.44$, standard error = $.10$). This factor explains 7% more of the variation in the perceived HRD effectiveness score. No significant effects were found when interacting the variable 'form of HRD program' with the variable 'type of HRD program'. This means that the perceived effectiveness of tailor-made programs are less than other program forms, irrespective of whether they are geared to automation or social skills.

Table 4: Effects (and standard errors) of the form of HRD programs on perceived HRD effectiveness (standard program as contrast group) (number of respondents = 440; number of companies = 44)

	model 2	model 3d
intercept	1.83 (.16)	2.11 (.18)
supervising managers	-.05 (.06)	-.04 (.06)
subordinates	.14 (.11)	.16 (.11)
HRD company representatives	-.03 (.12)	-.05 (.12)
strategic aligning within companies	.49 (.05)**	.49 (.04)**
strategic aligning between companies	.47 (.19)**	.48 (.16)**
form of HRD program:		
standard (contrastgroep)		-
tailor-made		-.44 (.10)**
another form		-.13 (.13)
unexplained variance		
between companies	.075 (.02)	.04 (.02)
within companies	.304 (.02)	.303 (.02)
explained variance R ²	22%	29%
deviance	776.413	759.108

***) significant at $\alpha < .10$ (one-tailed)

Conclusion and Discussion

The survey investigated to what degree respondents' perceptions on HRD effectiveness varied as a result of certain organization and HRD related characteristics as summarized in Table 1. No differences in perceived HRD effectiveness was observed for the factors size and structure of the organization, structure of the HRD function, and transfer conditions. Apart from a recent closed study into the effect of training in the workplace (Van der Klink, 1999), it is not known whether other research supports one or more of these findings. Van der Klink's study found that the transfer of training is largely explained by characteristics of participants, i.e. level of self-confidence and behavior after training. Workplace characteristics (support by the manager or pressure of work) had virtually no influence on the transfer of training. The study presented here has included such characteristics among the transfer conditions.

A link was found between other organization and HRD related factors and perceived HRD effectiveness. For instance, the effects of automation and social skills programs will vary whether shortcomings in actual performance of employees, departments or the entire company need to be resolved. A possible explanation may be that with social skills programs other kinds of knowledge, skills and attitudes are important than with automation programs. With the latter, the competences are, in most cases, very specific. It mainly concerns the learning of facts and procedures which are easy to apply to the tasks and functions of HRD participants. Competences that have to be learned in social skills programs are more general. They often concern communication, cooperation or managerial skills and attitudes, which are less easy to apply (Romiszowski, 1984).

The HRD climate correlates negatively with HRD effectiveness regardless of the type of HRD program. This is amazing, because it seems more logical that a positive HRD climate will enhance the transfer of the learning competences to the workplace. A possible explanation may be that the climate scale was based on perceptions of one respondent group (HRD company representatives). Their perceptions may be different from those of other groups of stakeholders. Managers may also vary concerning their attitude towards HRD. Some of them may fulfill an active and stimulating role, while others are likely to impede the learning and development of their employees employees (Tjepkema, ter Horst, & Mulder, 1999).

One of the findings of the survey was that HRD departments are less effective when they are part of a staff department, for instance, the company's personnel department. This is likely to do with the disadvantages that are ascribed to a line-staff organization everywhere. A staff position, away from the core processes of a company, will impede the department to pay full attention to problems and developments in working practices. This position favors a more theoretical and top-management approach.

The form the HRD program takes correlates negatively with perceived effectiveness. When compared to standard and other forms of HRD programs, tailor-made programs result in lower effectiveness. This partly explains why social skills programs prove to be less effective than automation programs (Wognum, 1999), since the former are often custom-made. However, no studies were found to support this finding. As far as is known, only the earlier-mentioned Van der Klink study points in this direction. Van der Klink puts the workplace as a powerful setting for training into perspective, largely due to the area of tension that exists between producing profitable work on the one hand and creating sufficient space for learning processes on the other. It is on-the-job training programs, in fact, that are typically tailor-made. These results are somewhat paradoxical in nature, because it may be expected that tailor-made programs are most effective because of their adjustment to the specific corporate problem. A possible explanation may be that customized programs were not the right answers for the company problems identified. Another possible explanation is that the programs were designed from the perspective of one group of employees, in most cases the HRD company representatives. Their viewpoint may be different from such other stakeholders as the HRD participants, their supervising managers, colleagues and subordinates. The so-called tailor-made program then lacks the viewpoint of all persons involved, and is not entirely tailor-made.

Considerations for HRD Practice and Further Research

Based on the findings, a closer link can be arranged between HRD structures and processes and those contextual characteristics which proved to influence HRD effectiveness. However, in future research, some of these factors need to be further considered when studying the effects of contextual factors on HRD effectiveness. One such factor

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is the HRD climate within a company. This factor should be measured not only among HRD representatives but also among other stakeholders in order to investigate its influence on HRD effectiveness. Only then it will be clear whether HRD climate positively influences company HRD programs and thus supports the findings of, for instance, Kessels (1993) and Rouiller & Goldstein (1993). Further research into the impact of transfer conditions on HRD effectiveness is also recommended. It also seems unlikely that every contextual factor promotes HRD effectiveness separately (cf. Roth, 1992). Research into the internal consistency between organization and HRD related factors is therefore desirable.

In order to carry out further research a sufficient number of effective HRD training and learning programs need to be selected, which makes demands on HRD structures and processes in companies. For instance, one of the survey findings was that the HRD department is less effective when it is part of the personnel or other staff department. Two strategies may be used to achieve more effective HRD and other learning programs. The first is that HRD departments are placed more in management line. This however increases the distance from the company strategy. The second tactic is to improve the way in which the central department operates, drawing up a strategic mix aimed at centralized and decentralized control. Finally, in order to be effective, tailor-made programs have to be designed not only from the viewpoint of individual HRD company representatives, but from the perspectives of all relevant stakeholders.

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