# HUMAN PROCESS INTERVENTION EFFECTS ON ORGANIZATION EFFECTIVENESS THROUGH VARIOUS PERFORMANCE – AN EMPIRICAL VALIDATION

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Abstract: Human process intervention (HPI) originate from the control of social psychology and it is the arena of group dynamics and human relations. The HPI are directed to improving the interpersonal and intergroup relations among employees in the organization to achieve the potentials of profitability and productivity. This study intentional to focus on the relationship between HPI (Process consultation, Team building and Sensitivity training) on Organization Effectiveness (Individual performance, Group performance and Organization performance) in software companies. The data was collected from operative level employees in the software companies using non-probability sampling techniques to measure the relationship between human process interventions on organization effectiveness. An empirical evidence from the study has presented and identified first factor enhancing the performances of the employees in the software companies.

Keywords: Human process interventions, Organization effectiveness, Performances.

## INTRODUCTION

The first category of OD interventions is human process intervention. Human process intervention is a process that focus on employees to understanding the own behavior and others behaviour for the purpose of improving the benefits through problem solving, decision making to accomplish the organizational goals within an organization and it includes process consultation, team building and sensitivity training measures the first category of OD interventions.

### PROCESS CONSULTATION

In an effort to examine consultant-client relationship, Ben-Gal and Tzafrir (2011) conducted two studies to get a clear insight using a combination of qualitative and quantitative methods. The first study was based on semi-structured one-to-one interview and the second study was a quantitative study. The sample respondents were departments of organizations which underwent organizational change with the help of external consultants. The results indicated a positive significant relationship between the levels of consultant-client relationship and the consultant's commitment and consultant commitment showed a partial influence between trust and success of organizational change. Marques et. al., (2010) in their article titled Asking for inner-consultant: the power of communicating, listening, trusting and collaborating,

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discussed internal consultants as problem-solvers and connectivity enhancers. The sample for the study was twelve scholars and coaches from educational institutions. The study examined attaining focus, identifying the problem and the consultant, broadening and enriching the solution base, through simple exercises. It was found that the four teams were able to find pragmatic solution to a problem they were working on; three out of the four teams were able to identify a common problem. The study concluded that communicating, listening, trusting and collaborating are prerequisites for rewarding outcomes.

The relationship between unions and joint consultation committee (JCC) was analyzed by (Parasuraman et. al., 2009) through qualitative case study with an objective to explore the practice of JCC in Posco and Posindo and to further extent Marchington's model. Data reference period was between September 2003 and June 2004. Data were collected through interview, direct observation, documents review, and field notes. Samples were selected by non-probability sampling method – convenience sampling. The findings showed that the adjunct model best explained the practices of Joint Consultation Committee (JCC), whereas both JCC and collective bargaining (CB) had an integrative relationship for the beneficial of management and employees. The principal focus of the study by (Beaumont and Hunter, 2007) was the process of joint consultation. The study investigated the fragility of consultation processed while facing inter-party differences arising inside or outside the consultation arena using qualitative approach based on two case studies. The findings emphasized the importance of understanding consultation as process and the critical role in its different dimensions.

To gain knowledge on how business consultants perceive their role and contribution within their client's organization (Kakabadse and Louchart, 2007) did a study. The authors conducted a series of interviews with 17 business consultants selected from different fields, which included change management, information technology, corporate finance and human resource. These business consultants were questioned about their opinion on the nature of relationship with their clients; pros and cons of their role; their freedom to exercise control and discretion. The findings indicated differences from previous researches. The study concluded that business consultants appeared to be very humble in their approach to their relationship with clients. Cooke (1997) the concepts, process consultation and conduct of development practice are related. In his article, the author explained the case for clinical perspective and process consultation. He reviewed process consultation, alluding to work carried out applying the concept in development and outlined the relationship between process consultation and the clinical perspective. He also drew the difference between the clinical perspective and ethnography and also between the clinical perspective and action research.

Larwood and Gattiker (1989) examined the expectations and perceptions of both clients and consultants toward the consulting relationship with a sample

of 52 client firms, using factor analysis of preferences for a number of values and described three significant dimensions in the consulting relationship, viz. confidence, activity and ability. Client firms, for this study, were selected at random from a published list. The results identified three significant factors: confidence in management, stimulation and human versus systems orientation. The results showed two directions: The consultants may have an egocentric bias tending to alienate them from some clients and consultants are well acquainted with some managerial problems and perceptions.

Schein (1987) recognized three principles of process consultation, viz. (i) clients know more about their own situation than the consultant; (ii) a consultancy process needs to engender psychological ownership of the activities that result from it on the part of the client and (iii) the consultant should seek to develop clients' capabilities to solve their own problems.

Boss and McConkie (1983) documented the methods to select an OD consultant. To assess the type of OD consultant to be hired, they posited the following questions for consideration: Is OD really the approach I want to take? Do I need a consultant or can the job be done by a speaker, trainer, facilitator or resource person? Is the chief executive officer willing to take responsibility for the change effort? Have I thoroughly checked out the consultant's credentials? Is the consultant showing me that he is competent? Does the consultant focus on the problems facing the client's organization? Does the consultant attempt to clarify the client's expectations of both the consultant and the OD effort? Does the consultant clarify his own expectations of the client and organization? Does the consultant insist upon data collection and problem diagnosis prior to any intervention? Does the consultant insist upon building resources within the organization to insure a successful OD effort? Does the consultant raise the issue of dependency? If so, how does the plan to handle this issue? Is the consultant aware of and willing to admit his own limitations? Are the consultant's interpersonal skills consistent with the needs of my organization? And what is my attitude toward financial matters? The authors concluded that selecting the right consultant can contribute significantly to a successful OD effort.

# **TEAM BUILDING**

Gabrielsson et. al., (2009) identified four basic leadership styles – analyzer, director, creator and connector; the strengths and weaknesses of each style, communication preferences and analysed primary back-up and described all the important skills of style flex, based on literature review. The results indicated two interactive dimensions at the heart of a leader's behaviour, they are: assertiveness and responsiveness. The study asserted that the leadership styles paradigm can be a very important reference point in the process of transformational team building. Benson (2009) studied the complexities of managing teams in today's contemporary organizations and critically argued that team creation and implementation within

an organization is complex as there are social, behavioural and process dynamics. He discussed four areas concerning team management: (i) acute understanding of team type and team stage; (ii) the manager should consider development areas that relate to his or her strengths and weaknesses; (iii) a mix of transformational and transactional leadership behaviours needs to be emphasized and (iv) leadership falls under the management umbrella, rather than a separate entity.

Barner (2006) internal OD executive drew a clear picture of organizational conditions that lead to complexity in (i) team structure, (ii) operation and (iii) dynamics. He also proposed few guidelines for facilitating team interventions to help OD practitioners plan extremely complex and difficult team-building interventions. This guidelines included six aspects, they are: (i) check your assumptions; (ii) step outside the circle, (iii) map the organization, (iv) determine your path of entry into the intervention (v) use triangulation to explore alternative perspectives and (vi) understand the context for change. He concluded that the reasons for failures in team-building were due to facilitators operate from team archetypes that are radically obsolete and severely underestimate the complexity of certain team-building issues, based on the team role model. Holton (2001), team building in a virtual environment is a challenge which involves creating avenues and opportunities for team members to have the level and depth of dialogue necessary to create a shared future. The study used participatory action research with both inductive and deductive approaches to inquiry with six-member team. He demonstrated that identifying and applying appropriate team building strategies for a virtual environment will enhance organizational effectiveness and will improve the quality of working life for the team members.

Using team work for the improvement of organizational performance is proposed in a number of literature papers. Castaka et. al., (2001) discussed seven factors that affect successful implementation of high performance teams, they are: organizational impact, defined focus, alignment and interaction with external entities, measures of performance, knowledge and skills, need of the individual, and group culture. The authors proposed an implementation plan for organizations, willing to implement or rejuvenate strategies leading to high performing team development.

Heap (1996) described three ways to build teams; described designs based on data, relationships and purpose; discussed advantages, disadvantages and appropriateness with illustrations. He indicated that poor relationships at work cause enormous amounts of unhappiness and wasted efforts. He insisted that managers should think about the processes operating between people and groups and ensure clear communication of what people need for better team building. Berger (1991) described six levels of change to break down barriers to inter- departmental team building: (i) personal awareness and appreciation of others, (ii) relationship building, (iii) procedures for decision-making and information flow, (iv) temporary structures, such as task-forces, (v) roles and responsibilities and (vi) organizational

structure. He summarized the following change strategies: Organizational awareness (bottleneck analysis); relationship building (team role identification); procedures (role negotiation, decision analysis, open forums); temporary structures (task force, quality circles); roles (delegation analysis) and structure.

### SENSITIVITY TRAINING

Madani et. al., (2013) examined the relationship between management training and the individual performance of the government managements of Yazd with a sample of 107 middle managers. The variables studied were, education, age, gender, working background, employment status, and training hours. The findings of the study did not find any significant association between management training and individual performance of the government managers. Homklin et. al., (2013) investigated four levels of Kirkpatrick's model with a focus on moderating the influences of individual and work environment characteristic variables, which are learning motivation, self-efficacy, motivation to transfer and social support. The study results highlighted the direct relationship between (1) self-efficacy and learning and (2) learning motivation and learning. Motivation to transfer as a moderating variable had negative effects on the relationship between learning and behaviour. The results confirmed the influence of the individual and work environment characteristics on training outcomes and it has implications for enhancing training effectiveness.

Sultana et. al., (2012) examined the training practices of telecommunication sector in Pakistan to determine their impact on employee performance. The variables examined in this study were (i) Independent: training; (ii) Intervening: salary and job involvement and (iii) Dependent: employee performance. The study found that most organizations meet their needs for training in an ad hoc and haphazard way while others set about identifying their needs, then design training activities in a rational manner and finally assess the results of the training. The study concluded that if organizations invested in right type of employee training, it can enhance employee performance as well as competencies and skills.

Singh and Mohanty (2012) studied the effects of training on employee. The focal point of the study was on training practices and employee productivity and their relationship. They collected secondary data about the net sales and number of employees of various organizations. Employee productivity was calculated from number of employees and total sales/turnover for the financial year. They concluded that training has a significant role to play on productivity but there were other dominant market forces which reduce its significance.

Del-Valle et. al., (2009) studied the effects of training on performance in service companies. The aim of the study was to determine whether effort invested by service companies in employee training had an impact on their economic performance. Data was measured over a period of nine years. The findings supported that training activities are a positive influence on company performance.

Nguyen (2009) used a post-test-only control group design to explore what combination of performance support and training did users prefer? There were three treatment groups: training only, EPSS only, and training and EPSS. One group received training prior to completing the performance task. Another group had access to an EPSS while completing the task but did not receive any prior training. The third treatment group received both the pre-task training and access to the EPSS. The post-task attitude survey was assessed using an eight-item survey questionnaire. The study recommended that while the volume of information delivered during pre-task training should be minimized, access to support content during job performance should be much broader.

Sahinidis and Bouris (2008) investigated the relationship between perceived employee training effectiveness and job satisfaction, motivation and commitment among 134 employees and lower managers of five large Greek organizations after a training programme. The questionnaire assessed employee attitudes towards the training received as well as their attitudes towards their employers. The results indicated a positive significant correlation between the employee perceived training effectiveness and their commitment, job satisfaction and motivation. Additionally, high correlations were also found between the latter three variables.

Aik and Tway (2006) explored the domain of the elements and principles of training from the learner-practitioner's perspective by taking into consideration three basic elements: the work, the worker and the workplace. They pointed out that key scientific aspects of effective training programmes include close observation of the need for training, the training itself and the results of the training. The study concluded that sound training programmes can help an organization ensure the highest level of productivity among its employees. Such programmes not only train workers to do their jobs correctly, but also make sure that time was not wasted on unnecessary or inefficient training.

Chiaburu and Tekleab (2005) investigated individual and contextual antecedents of learning, transfer of learning, training generalization and training maintenance in a work context. They tested hypotheses using hierarchical regression analysis on data obtained from 119 employees who attended the training. Study participants were engaged in jobs of a technical and administrative nature. Based on the guidelines from the conceptual literature analyzing multiple dimensions of transfer: learning, transfer, maintenance and generalization, data were collected between six and 12 weeks after the training programmes were completed. The findings supported the relationship between continuous-learning culture and supervisor support and training motivation.

Cote (2004) in her article highlighted how formal training and experience in OD, affect perceived proficiency at work. The objective of this research was to determine the way in which years of experience in OD and formal OD training, combined or separately examined, affect perceived OD proficiency. The six OD

competency areas analysed were: knowledge of OD, theory and practice in OD, design and intervention skills, influencing skills, self-awareness and values and ethics. The 31 behavioural indicators were enumerated as part of an assessment form that was completed by clients of OD practitioners. Results validated that formal OD training affects perceived OD proficiency and though not statistically significant, that years of experience in OD have a slight positive impact

The goal of the study by Arthur and Bennertt (2003) was to address the gap in the training effectiveness literature by conducting a meta-analysis of the relationship between specified design and evaluation features and the effectiveness of training in organizations. The study focused on (a) the type of evaluation criteria, (b) the implementation of training needs assessment, (c) the skill or task characteristics trained, and (d) the match between the skill or task characteristics and the training delivery method. The needs assessment components were: organization, task and person analysis. Multiple training methods were used: lectures and discussion. The types of training contents were: cognitive, interpersonal and psychomotor. Results suggested that the training method used, the skill or task characteristic trained, and the choice of training evaluation criteria were related to the observed effectiveness of training programmes.

Spears and Parker (2002) analyzed the impact of training on performance appraisal satisfaction, in particular examined whether the manner in which a firm implements training improve employee satisfaction or not. The survey instrument included questions on company training programmes such as new employee training, in-house training and support for continuing education. The results indicated that training programmes did influence employee satisfaction. It was found that new employee training, in-house training and support for continuing education, each reduced the probability of employees being dissatisfied with the performance appraisal process. The authors suggested that a system of improved training programmes and support combined with effective specific feedback can increase employee satisfaction.

In discussing the use of media for training (Clark, 2000) referred to a number of different methods. He classified the methods into four broad categories: Lock step (relatively inflexible), self-paced, job and specialized. He briefed that relatively inflexible methods include conventional classroom instruction, lecture and video learning. Self-paced methods include personalized systems of instruction, computer-based training and distance learning. On the job include acting as a job performance aid and on-the-job training. Specialized forms of training include coaching and mentoring. Holton (2000) part of transfer design is the degree to which training instructions match job requirements. He observed that investigation directed at building a contingency model of transfer-oriented training intervention design would provide information important for developing training environments more conducive to positive transfer in terms of productivity effectiveness.

Furjanic and Trotman (2000) had identified four basic phases of worker training: (1) assessing the need for training – determining if training is needed, how much, and what kind, (2) designing a training programme – what skills must the workers be trained in, and what skills do they have at present (3) delivering the training – it is important to incorporate basic, well-known principles of adult learning and (4) evaluating the training that was done evaluation is necessary to decide whether the training is fulfilling its objectives and to gain information on how the training programme can be improved. Oakland and Oakland (1998), in their article pointed out that training prepares employees to improve performance on present jobs and was usually regarded as an expense item necessary to make the organization more effective and to increase productivity. They observed that training can encourage employee commitment and participation if the method selected is the most appropriate for the situation. According to them, choosing the best approach provides an important link between people management, employee satisfaction and results.

According to Fowler (1995) in-house training or on-the-job training is usually under the guidance of an experienced supervisor or professional trainer and relies on one-on-one coaching, hands on demonstration, and practice. He argued that in-house training, however, cannot be entirely successful unless the method selected was appropriate for the situation and the level was suitable for the trainees. With a sample of 380 managers and supervisors (Guthrie and Schwoerer, 1994) studied the individual and contextual influences on self-assessed training needs. The questionnaire measured training self-efficacy, managerial support (7-point Likert scale), training utility, training needs, job tenure, education level, span of control. They found that training self-efficacy and managerial support positively influenced perceptions of training utility. Educational level was found to be negatively associated with these perceptions.

Earley (1994) in his study examined the theoretical and empirical relationship of training and individualism-collectivism to self-efficacy and performance in studies of managers from Hong Kong, People's Republic of China and the United States. A laboratory experiment and a six-month field experiment were used. In the laboratory experiment, focus was on the role of training and culture on an individual's performance as a result of his or her self-efficacy and effort. Field experiment included task-strategy information in the form of job-related information concerning how to perform better. The design included a cultural variable, individualism-collectivism, and three types of task training, no training, individual- focused training, or group-focused training. The study found support for a mediating model of effort and self-efficacy in predicting the effects of individualism and collectivism, training, and their interaction on performance.

# **OBJECTIVES OF THE STUDY**

This study find to assess the human process interventions measured by process consultation, team building and sensitivity training effects on organization effectiveness which is measured by Individual performance, Group performance and Organization performance in the software companies.

### METHODOLOGY

Descriptive approach was used in this study to find out the relationship between human process interventions on organization effectiveness. Here, a structured questionnaire was used for the data collection and the questionnaire consisted of 23 items pertaining to human process interventions and 26 items are organization effectiveness with closed ended questions on five point likert scale ranging from 5 – strongly disagree to 1 – strongly agree. The sample respondents for this study, 623 (samples) responses were collected from the operative level employees of software companies. The population for this study comprises of all the employees working in software companies with regard to selecting respondents, convenience sampling criterion was employed with a total of 49 items.

### **DATA ANALYSIS**

Reliability statistics has been tested to verify the internal consistency of the endogenous and exogenous factors obtained in the sample. The cronbach's alpha is found to **0.792** which was presented in the table 1. Before using the test results, violation of homogeneity of variance was checked and accordingly, appropriate test results were used for interpretation.

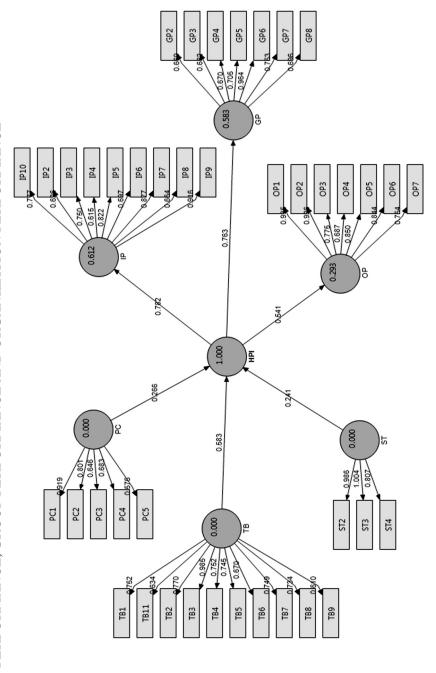
TABLE 1: RELIABILITY COEFFICIENT

Reliability Coefficients				
N of Cases $= 623.0$	N of Items $= 49$			
Alpha = 0.792				

Being satisfied with the reliability of the instrument, the researcher carried out the structure equation modeling to find out the relationship between human process interventions on organization effectiveness.

The coefficient of determination, R2 is 1.000 for Human Process Intervention endogenous latent variable, this means that the three latent variables (Process consultation (PC), Sensitivity training (ST) and Team building (TB)) are highly explain 100% of the variance in Human Process Intervention. The inner model suggests that Human Process Intervention has higher impact on individual performance (.782) followed by group performance (.763) and organization performance (.541).

RELATIONSHIP BETWEEN HUMAN PROCESS INTERVENTION TOWARDS INDIVIDUAL PERFORMANCE, GROUP PERFORMANCE AND ORGANIZATION PERFORMANCE



The hypothesized path relationship between Human Process Intervention and Individual performance (IP), Group performance (GP)& Organization performance (OP) is statistically significant, because its standardized path coefficient (.782, .763 & .541) is greater than 0.1). Thus we can conclude that Individual performance (IP) is strongly influenced by Human Process Intervention (HPI) followed by Group performance and Organization performance.

	AVE	Composite Reliability	R Square	Cronbachs Alpha
GP	0.548	0.893	0.582	0.795
HPI	0.507	0.947		0.922
IP	0.571	0.921	0.612	0.831
OP	0.686	0.938	0.292	0.789
PC	0.539	0.850		0.774
ST	0.877	0.955		0.727
TB	0.557	0.925		0.873

## **Internal Consistency Reliability**

In PLS-SEM, composite reliability is used to measure internal consistency reliability (Bajozzi and Yi, 1988), (Hair et. al., 2012) from the above table it is inferred that all values are higher than the preferred level of 0.7. Hence the reliability is high.

# **Convergent Validity**

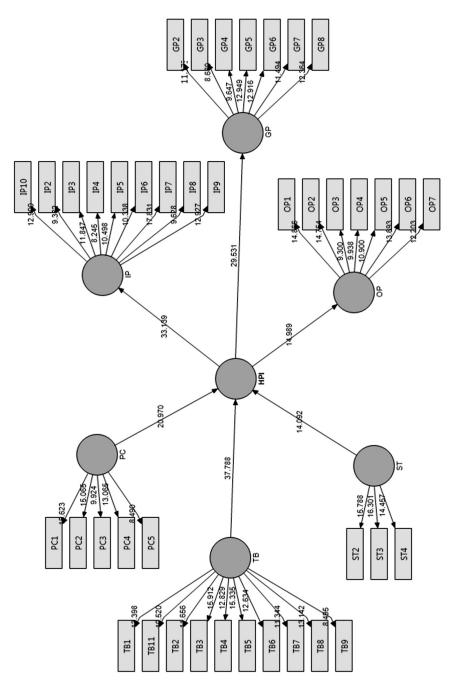
To check the convergent validity each latent variables of Average Variance Extracted (AVE) is evaluated and it is found that all of the AVE values are greater than the acceptable threshold of 0.5, so, the convergent validity is confirmed.

# **Discriminant Validity**

Fornell and Larcker (1981) suggested that the square root of AVE value in each latent variable is used to establish discriminant validity, if this value is larger than other correlation values among the latent variables. To do this, a table is created in which the square root of AVE value is manually calculated and written in bold on the diagonal of the table.

	GP	HPI	IP	OP	PC	ST	TB
GP	0.740						
HPI	0.713	0.712					
IP	0.738	0.702	0.755				
OP	0.510	0.540	0.558	0.828			
PC	0.669	0.690	0.660	0.513	0.734		
ST	0.650	0.705	0.684	0.357	0.611	0.936	
TB	0.732	0.671	0.725	0.542	0.718	0.705	0.746

PATH MODEL BETWEEN OD INTERVENTIONS AND ORGANIZATION EFFECTIVENESS



		Original Sample (O)	Standard Error (STERR)	T Statistics ( O/ STERR )	Sig. value	Hypothesis Accepted/ Rejected
H1	HPI -> IP	0.782	0.023	33.13	Greater than 1.96 (0.05)	Accepted
H2	HPI -> GP	0.763	0.025	29.53	Greater than $1.96(0.05)$	Accepted
Н3	HPI -> OP	0.540	0.036	14.98	Greater than 1.96 (0.05)	Accepted

(>p-0.05)

**H1:** The relationship between Human Process Intervention (HPI) and Individual Performance (IP) at 95% confidence level, the significance value is 1.96. Since the T Statistics value (33.13) is greater than (1.96) H1 is accepted. For every unit increase in HPI there is .782 units increase in IP.

**H2:** The relationship between Human Process Intervention (HPI) and Group Performance (GP) at 95% confidence level, the significance value is 1.96. Since the T Statistics value (29.53) is greater than (1.96) H1 is accepted. For every unit increase in HPI there is .763 units increase in GP.

**H3:** The relationship between Human Process Intervention (HPI) and Organization Performance (OP) at 95% confidence level, the significance value is 1.96. Since the T Statistics value (14.98) is greater than (1.96) H1 is accepted. For every unit increase in HPI there is .540 units increase in OP.

### **FINDINGS**

The hypothesized path relationship between Human Process Intervention and Individual performance (IP), Group performance (GP) & Organization performance (OP) is statistically significant, because its standardized path coefficient (.782, .763 & .541) is greater than 0.1). Hence Individual performance (IP) is strongly influenced by Human Process Intervention (HPI) followed by Group performance and Organization performance and it has a positive effect on organization effectiveness specifically human process intervention has a high effect on individual performance compared to group performance and organization performance.

### **CONCLUSION**

The primary aim of this research was to identify the Human Process Intervention in the top software companies in India. In addition to that, the study also looked into the impact of human process interventions on organization effectiveness. Evidence has been taken from the literature review to sustain the relationship suggested beyond and a conceptual framework was proposed. A positive impact has been confirmed between human process interventions and various performance of organization effectiveness. The most contributing intervention is team building, it has a higher contribution to organization effectiveness.

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