ABSTRACT:

Technology is a systematic application of physical forces for production of goods and services. It is the knowledge, process, tools, methods and systems employed in the creation of goods and in providing services. Technology is made up of the hardware software, and brainware. The hardware is the physical structure and logical layout of equipment and machinery. The software is the knowledge of using the hardware to carry out the required tasks and the brainware is the reason for using technology in a particular way. All these depend on the know-how of the human element and the environment in which he operates and live. It is imperative for organizations and nations that would like to cope with the changes of the 21st century to employ various methods that could influence their human resources to innovate at all times. Most developing nations have not really promoted technological innovation hence their underdevelopment and poverty. This paper examines the relationship between technological innovation and organizational performance. It also explains how employee relations strategies could be employed for technology innovation for improved organizational performance and for national advances in economic and social changes.
Introduction:

Technology is the result of men learned and acquired knowledge or his technical skills regarding how to do things well (Khalil, 2000). Technology Acquisition, use and maintenance are the major determining factors for survival in all organisations. It is its lifeblood, but it could only occur through human interventions. Quinn (1969) argued that it is incumbent on any organisation to monitor technological changes, train and motivate employees to innovate, because technology covers every aspect of all organisations. Kubbr (1977) observed that new technology, whenever introduced in any organisation, changes all aspects of its operations. Changes in technology have really affected most industries worldwide. Globalization, which dominates the world today, was influenced mainly by communication technology. Digital technology integrates the world and it “allows organisations to manage their channels of communication” (Negrophone, 2000). Broadband telecommunication has turned the telephone network from being primarily a medium for voice communication into multimedia network, which carries video and other image-based services, high-speed data communications and other computer-to-computer traffic, as well as voice and text communication. It was mostly these that allowed globalization to develop, thrive and blossom. The major challenge facing most organisations in the global economy is how to manage rapid and radical technological change. Technological innovations to a large extent determine organisational competitiveness. The technology of a firm includes a body of knowledge, skills and procedures and physical manifestations such as tools and machines (Merrifield, 1983). The effect of the rapidly changing technology has necessitated the need for the employment of skilled and knowledge workers and to motivate them to be innovative to cope with change. The level of technological development of any nation or organisation influences its ability to produce quality goods and services and to be profitable, to create wealth and to improve the people’s performance and well-being. This paper uses descriptive method to examine the relationship between employee relations and improved technological innovation. Process and Management of Technological Innovation the interface between human resource management, globalization, technological innovation, change, organisational competitiveness and survival needs to be considered. An organisation can adopt employee relation strategies to manage globalization, which is the outcome of rapid technological changes. The objective is to use employee relation strategies to strengthen human resources innovative capability in order to manage technological, change and organisational competitiveness. Motivation theory of Maslow (1943, 1954) and Herzberg (1959) hygiene and motivation theory were used with other human resource management theories. Factor, such as the provision of physical working conditions, economic status, orientation and security, and motivational factors such as opportunities for advancement, responsibility, recognition and achievements were used to stimulate and motivate employees for improved technology innovation. Scott (1966) proposed the activation theory in contrast to goal oriented theory of Maslow. To him moderated level of arousal is mostly preferred for the achievement of any goal and that high activation result in boredom,
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reluctances and non creative performance. Locke (1976) sees motivation in terms of goal settings. Individual strive to attain only goals which satisfies him and give him pleasure. Spencer Jr. (1986) method of giving hard dollar number to human resource projects and programmes was also considered. Efficiency to him is to use fewer dollars for more benefit, effectiveness is to save more for more and better results and productivity is to do more for less dollars. He applied this method to knowledge workers such as sales people, engineers, market researchers, corporate legal staff, health care professionals, trainers, human resources managers and others. He succeeded in providing effective methods of quantifying knowledge workers contributions through the application of cost-benefits and productivity improvement strategies. Though useful and relevant in justifying knowledge workers position, it could not provide sufficient explanation to justify technological innovation improvement expenses. Technological innovation is not time barred and budgetary constraints and cost-benefit methods may to some extents hindered the application of its strategic management effectiveness. It is difficult to calculate and justify the dollar value of time spent in any R & D project that is directed towards improved technology innovation. To properly utilize it and to avoid its breakdown and misuse, new technology requires adjustment in methods of marketing, in the supply of materials and spare parts, in cost control, in wage scheme, in the assignment of responsibilities to workers and managers and in the financial and organisational structure of the enterprise. Human resources managers should therefore, play an important role in initiating, maintaining and monitoring technology available to the employees. Socio technical system of Merguiles and Colflesh, (1982) explained the relationship between technology and management of human resources at groups and individuals level. They provided a way of developing a better fit between technology and structure and social interaction of the work place, so as to enhance desired organisational outcome. Socio-technical system in below Figure shows organisational components. They are combinations of tasks, technical subsystem factors, human processes and management subsystems.

![Socio Technical Interface](image)

![Socio Technical System Model](image)
Technological Innovation and Organizational Performance: Employee Retention Strategies

Source: Merguiles and Colfesh (1982). A Socio-Technical Approach for Planning and Implementing New Technology, Training and Development Journal, p. 16. Technological subsystem includes the technology itself, workflow, information flow, job roles and relationships, task configuration and relationships, policies and job feedback. Human subsystem includes organisational climate, level of motivation, communication, and level of commitment, participation, co-operation, and satisfaction with work environment, willingness to accept change, work group factors, human resources development, and satisfaction with compensation and company policies. Management subsystem includes technologies and structures used to control and direct technology (Margulies and Colflesh, 1982).

The most difficult task of human resource managers in technology-driven organizations is to manage the interface between technologies and human subsystems. This interface when managed properly provides the appropriate. Understanding of both the technical and human subsystems is essential to manage this “fit” even during times of rapid technological change. Management of the fit at all times becomes imperative because of high probability that technological changes can create a “misfit” or disequilibrium in the existing organisational structure and main groupings within it, and in its projected input and output systems. This problem can also occur when major transforming process is taking place within the technical system, and with other relevant technical information system e.g., nature of raw materials, the equipment and critical interface.

The complexities of the current major characteristics of the existing human system with the set of complex task relationships required to complete various tasks; the set of attitudes predominant in the group and the organisational climate, give credence to the use of industrial relations system in the improvement of technological innovation. Industrial relations system can be used in analysing and structuring carefully organization, individual, and group interests. It provides possible avenues to draw sufficient and relevant information necessary for the design of the human system. It can stimulate improved employees performance in the new global production system and in the description of the activities associated with workers roles. Industrial relations also enable employees to take active part to provide means of assessing new skills required of supervisory personnel and specification of development plan to increase employee’s innovativeness.

Human Resource Management for Technological Innovation:

In today’s information technology dominated world, equipment and machineries have become so complicated that each are made up of different technologies or many aspects. Combination of optics and electronics created optoelectronics, which gave birth to optics-fiber communication system; and the fusion of mechanical and electronic technologies produced macaronis revolution, which has transformed most industries. They are all the result of improved technological innovation in the developed and some developing countries of the world. Technological innovation integrates organization and technology. The desire to find improved and better ways to produce large quantity of quality goods and services to meet customer needs often make scientists
and engineers to be creative and innovative.

Most scientific and technology driven organizations in the developing countries often tend to ignore investment in continuous and systematic maintenance, and training of their scientists and engineers to cope with rapid and radical scientific and technological changes. This is because a high technology-driven company is capital-intensive, which they could not afford. The ratio of labour-cost to their overall production cost is therefore, relatively low. The continuous reductions of the work force as technology improves make employees influence and activities to attract less attention of owners and management. They assume that human resources inputs have less effect on overall production process. They concentrate on the profit margin which tends to be higher as new technologies are introduced, thus making it seem that only technology contributes to the overall well-being, competitiveness and survival of the organizations and nations.

Only improved technology to them can enable them to absorb the maintenance and developmental costs of human resources. The resultant effects of these assumptions were lack of innovation of human resources and organisational inability to survive under constantly changing and threatening environment which only the human element possess the ability to assess, use and manage. Many organizations have now realized that human errors are costly and that their lack of innovation contributes may lead to machine collapse and organization non performance. It pays to invest in maintenance and development of the employees in the long and short run.

Technology has since its introduction improved human resource and organisational performance to the extent that most of them depend on it. However human resource management still occupies a critical position in organizational settings. It is the human resources through their innovativeness that can promote technological development in all nations and industries. Japanese success in technology and science was due to the high level of education of her citizens, her traditional system of business management, existence of major market for her goods and the creative attitude of the Japanese. In most Japanese industries, all employees are considered to be part of management; communication is “bottom up” rather than “up bottom”. All these are not available in most developing countries.

Most big organizations in developed countries of the world have come to realize that it is dependable and lasting for them to invest on the human capital as much as that of capital assets. Pagiani (1997) corroborated this and said “We are in the midst of a new wave of knowledge management, knowledge has emerged as a critical factor of production, as important and sometimes more important than capital.” Continuous fusion of all aspects of engineering has necessitated the need for the improved maintenance, motivation and continuous training and development of engineers and scientists for improved technological innovation.

Employee’s Relations Strategies and Organisational Improved Performance:

Galbraith (1988) stated that all organisations are more than just structures and all of its elements must
“fit” and be in “harmony” with each other. The effective organisations are those that have blended their structure, management practices, rewards and people into a package that in turn fits with its strategy. To survive, all organisations need different patterns of strategic changes, organisational structures, management systems, and company culture. Strategic management for organisational competitiveness is indeed complex, but necessary for organizational survival. Strategic management could only succeed, if it recognises and place great importance in using the innovativeness of the human resources in making good well-conceived decisions. Since business environment is dynamic, strategy must also be dynamic. Strategy should also take cognizance of the production process and the human resources that makes production. Human resources reward should be properly planned (Adebayo, 1989) (Fajana, 1997).

An organisation could only achieve all its objectives through people. The nature of the relationship of people at work is therefore, fundamental to the effective management of an organisation. Nadler, et.al. (1979) developed a conceptual framework for understanding organisational behaviour based on individuals as basic units joined together by an organisation to form a group. Individuals interact through communication, decision-making and leadership for the achievements of organisational goals and objectives. Organisation through its structure puts together its human resources for goal-oriented action. The way various human resources in all parts of an organisation are combined together into relatively fixed relationship and defined patterns of social relations determine their performance. Organisations have to create positive work environment to make the work interesting and flexible and to motivate and develop employees if they are to be competitive in a changing and dynamic environment.

Hall’s, (1991) method of implementing and managing change relies on creation and recreation of vision and of their communication, evaluation, translation and implementation of vision which are necessary for individuals and groups innovations. Ideas, inspiration, demand for excellence propels managers to work for the achievement of organizational vision and to direct others for improved product and services. Below figure clearly explains Hall’s model for change management.
Elements for Implementing and Managing Change


A clear vision that determines the organisation’s business in relation to the customers and competitors in a clear and concise manner should be jointly determined and announced by the management and the trade union. This vision can be communicated effectively and consistently by the trade union. Once the interest of the trade union are integrated and protected, organisation’s visions are pursued by all members as they are energized to do more and are proud of their contributions. Individuals begin to take ownership for accomplishing the organisation’s vision. Implementation flows naturally and individuals are ready to innovate and make it happen. They are also ready to evaluate and recreate their vision to go along with the organisation’s vision.

Contingency theories of Koontz and Weihrich (1980) and Lorsch and Lawrence (1967) make it essential for organisations to consider their different structural characteristics before taking different actions appropriate for different tasks and goals. They identified the impact of environmental constraint on organizational structure. Environmental contingencies such as demand for organisational output, technological change, product, product mix and the likes set limits on how the organisation should be structured to survive and operate effectively. Human resource occupies an important position in determining whether organisations should be structured bureaucratically or with self-defined routines for producing large quality of identical goods or services. Most organisations today are organically structured with few routines to be performed by many highly skilled professionals to produce high quality and relatively unique goods and
services. Human resources inputs at the individual and group levels in formulating and implementing strategies for organisational competitiveness and survival are of great importance.

**Effective employee relation system** encourages individual and group commitments to excellence and help in creating favorable environment for innovation to take place. The fact that organisations are subjected to constant change makes it imperative for both management individual employees and trade unions to constantly evaluate the relevance and achievement of the organisation’s vision at all times. They can jointly determine the creation, recreation and communication of idea that can inspire them to translate, evaluate and implement innovative ideas.

**Trade unions** are set up to satisfy mostly the human resources group needs. It provides its members improved pay and condition of employment and protect them from loss of job. (Damachi and Fashoyin, 1986). Otobo, (2000) Union may be recognized and used by the management to stimulate creativity and innovation among its members. They can be employed to deliver recognition and appreciation, solve problems and protect their member’s loss of job, intimidation and harassment. The presence of the union may also ensure due-process in the performance of management and consistency in the treatment of different employees. All these are capable of making job environment to support technological innovation most especially among engineers and scientists. Empirical research conducted by Sienghtal and Beckter (2001) shows that unionized workplace promote integration and cooperation between workers and management, which make them to adapt innovation that are more conducive to productivity enhancement.

**Industrial relations** could be used to promote organisational competitiveness when the decisions to achieve objectives are based on performance-efficiency versus innovation, quantity versus quality of service or product and moral versus productivity. To achieve these, appropriate structures need to be jointly specified by management and trade union to support organisational change strategy, technological innovation and organisational development. It also needs to focus on tools and techniques for introducing and improving change. Industrial relations approach takes workers to be change agents whose performance can be improved through system design, career opportunities, clarity of goals, team work and group processes to increase motivation and improve their morale to be innovative and productive. Collective bargaining free workers from arbitrary punitive atmosphere, as it provides for the protection of the rights and privileges of workers. (Flanders, 1975) (Fasoyin, 1980)Trade unions bargain to improve the working condition of their members. Participative decisions making, job enrichment and effective autonomous work teams cannot be achieved to a large extent in mass-production technologies without trade unions and collective bargaining. (Schrank, 1974)

All elements affecting, supporting, helping and hindering employee’s performance can form part of the bargaining between management and the union for improved performance. Different performance interventions may be selected and agreed upon by
the management and union officials. Trade union officials when recognized and motivated can mobilize their members to offer suggestions or appropriate methods that can enable workers to reach their highest level of performance and innovation.

Globalization has significant impact on the practice of industrial relations like any other aspects of management, as it is also affected by technological change. Trade union officials and human resource managers now need to possess ability to read balance sheets and to understand the intricacies of integrated technology, finance and marketing to enable them perform effectively. Human resource managers and trade union executives can play a formidable role in the creation, formulation and communication of visions that are necessary to integrate and improve employee’s performance and guarantee organizational success and stability.

Recognition, assessment and integration of employee and organization’s needs are prerequisites for the management of any new system and technological change. They Szell (1992) are always the first step in problem solving process and in improving organizational competitiveness and survival in the midst of change. At the centre of all these actions is the human resource that determines the concept, the design, the maintenance and the uses of technology.

**Creation of Motivating Environment for Employee Technology Innovation:**

A motivating environment is not the same for everybody. What is motivating for one person may not be motivating for another. For example, a manager may have an employee who has a strong need for achievement; in another employee this need may be weak. Giving demanding assignments to these two subordinates would tend to motivate the first employee and demotivate the other. Individual employee and company needs may conflict. Managers may not be able to satisfy employees or subordinate’s needs because their fulfillment would be harmful to the company. For example, an employee may have a strong need for recognition. Because of that need, he demands more attention than the manager should reasonably give.

A motivating environment is also dynamic. Present incentives are not likely to work in the future. This position is supported by Abraham Maslow’s theory of motivation which stated that when needs are satisfied, “new (and still higher) need emerge.” For example, give a long-term contract to a man who has a need for security and that need loses its potency as a motivator. A motivating environment has to satisfy many different needs at the same time. Depending on who is doing the classifying, there is quite an imposing list of needs that serve to motivate engineers and scientists among which are needs for achievement, affiliation, autonomy, dominance, exhibition, understanding, aggression, esteem, and order.

Motivating environment is also dependent on achieving a balance between what a manager gives and what he gets from his employees. It is a world of tradeoffs, it is not easy for a manager to balance the conflicting interest of his employees with that of the organisation. For example, an employee may have a strong need for esteem, which a manager helps to satisfy by increasing his
responsibilities. But these new responsibilities force him to reduce the amount of time he spends with close office friends, which interferes with his need for affiliation. In spite of this, managers need to be close to their employees.

A manager who enjoys a strong relationship with a subordinate can help create a work environment motivating enough to neutralize demotivating influences. That is why it is critical that managers examine their relationship with their subordinates who appear to be undergoing undesirable behavioral changes. The following are undesirable behavioral changes that can be recognized in employees working in a de-motivating environment which can impair or reduce technology innovation. They can be found in the attitude of the following subordinates.

Subordinates who are withdrawing behave like spectators. They are not personally involved in their jobs nor are they committed to the company’s objectives. They are disinterested on lookers and indifferent performers.

The behaviour of an underlying subordinate can be stifling. That is because he has undergone a basic shift in his work attitude. Work, which used to be the primary interest in his life have changed to his weak-secondary interest.

Wailing attitude: Previously easy-to-manage subordinates become complainers, grieving about perceived inequities, many of which are petty and imagined.

Warring: This is manifested by general uncooperativeness and questioning of authority and agitation against management and the company.

Employees in this condition either declare war as an individual or as a member of a clique.

Worrying: This is a behavioural characteristic that many employees develop as a result of persistent feelings of insecurity and neglect. They are worried about their present situation and see their future as grim.

Managers should organise a counseling interview for the de-motivated employees particularly to those they can influence and simply ask about their morale and the factors that contribute to them. With some, this may yield valuable information and reinforce managers’ assumptions or force them to abandon them. With other subordinates, this method may yield sparse and questionable information. Perhaps the employee is not introspective and just does not know what motivates him. Or he may believe he is influenced by particular motives when in reality he is substituting one motive, for example, many people believe that their strongest motive is money whereas they really are motivated by the status or power it represents.

Managers can measure subordinates’ motives by searching for his own assumptions about subordinate’s motives, their stated opinions about what motivates them, and their behaviours.

By carefully observing the subordinates behaviours over a period of time, managers can be able to detect recurring patterns, which confirm the existence of strong motives, case histories, each describing recurring behaviour patterns, suggesting the existence of strong underlying motives.
Scientists and engineers who are demotivated can exhibit all these behaviors, which could impair their innovative and creative abilities. In fact, any R & D unit where there is a large number of this type of researchers in the team cannot be innovative.

The following behaviors can be noticed in demotivated individuals. These are: Winding down: This is when scientists and engineers completely isolate themselves from what is going on with the team. The Researcher withdraws and decides to work alone. Winding occurs when an employee becomes bored, indifferent and rejected, wailing when he feels disappointed, unappreciated and worrying when he feels out-of-date and unimportant. This may make him to be hostile and vindictive. Table 2 shows the strategies that can be used to correct these anomalies for improved individual and team technological innovation in the R& D unit and in the organisation. In any environments and organizations where these behaviours are dominant technology innovation cannot take place.

### Strategies for Removing De-motivating Behaviors for Technology Innovation

<table>
<thead>
<tr>
<th>BEHAVIOUR</th>
<th>FEELINGS</th>
<th>STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winding down</td>
<td>Frustrated, disappointed, excluded</td>
<td>Responsibility and achievement</td>
</tr>
<tr>
<td>Withdrawing</td>
<td>Alienated, neglected, Rejected.</td>
<td>Psychological closeness and affiliation.</td>
</tr>
<tr>
<td>Wandering</td>
<td>Bored, indifferent, uncommitted</td>
<td>Involvement and self-control.</td>
</tr>
<tr>
<td>Wailing</td>
<td>Hurt, unappreciated, envious.</td>
<td>Recognition and esteem.</td>
</tr>
<tr>
<td>Warring</td>
<td>Hostile, vindictive, cheated.</td>
<td>Positive interaction and Communication.</td>
</tr>
<tr>
<td>Worrying</td>
<td>Out-of date, unimportant</td>
<td>Growth and learning.</td>
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These strategies should be employed by managers to assess employee feelings and remove those impediments that curtailed or hindered employee’s innovativeness for improved technology innovation.

Science and technology is the essential ingredient of any innovation process or “chain” (Jamieson 1998). Science and technology considered to be the bedrock of socio-economic and political development of any nation and the primary agent of change. Most nations that witnessed accelerated technological change often achieve rapid-socio-economic development. Gupta and Singhal (1993) conceptualised innovation and creativity along four dimensions.

Result of an empirical research conducted by Muhlemeyer, (1992) confirmed that the efficiency of the R&D department determines a company’s ability to cope with change. All organizations that would like to survive should harness, improve and use effectively its employee’s creativity and competence. In the
developed countries, R&D is indispensable to industries. This is the result of rapid changes in the society that demand for continued creativity and innovation. R&D activities in most industries are geared towards improvement of their goods and services, or introduction of new ones to the market such that industries can remain in business, and for the industries to adapt to local raw materials for quality. But many organisations today could not survive the problems caused by the technological change.

Human Resource Management (HRM) Strategies that Foster Innovation and Creativity


They are: human resource planning used to determine the provision of adequate personnel needs to create effective innovation teams, performance appraisal strategy links individual and team performance with
company profitability, reward strategies motivate personnel to achieve organisational goals of innovation, and career strategy matches employee long-term career with organisation’s goals through training and education. Figure 8 demonstrates that all are interdependent and are to be effectively combined and managed for continuous employee innovation and organisational survival.

Sen (1988) sees many of these industries problems as emanating from management of uncertainty and management of “interfaces between R&D and the human resource.” Success of the R&D depends on the extent in which the sub units make use of their employees’ innovative ideas for the achievement of the organizational goals. Each unit of the organization is set up to perform different functions, the integration of which enables the organization to reach or achieve its desired objectives. A right balance has to be made between the interests all units of the organization and of the individuals and groups in order to effectively manage creativity, uncertainty and the interface between the R & D and organization sub units.

Industrial relation can be used not only to sensitize employee to be creative and innovative, but also for the management and supervisor to understand innovative people idiosyncrasies and problems. Employee’s creativity can be enhanced when he is recognized and appreciated, and he is given freedom to work in areas of his greatest interest. Innovative employees contact with stimulating colleagues, and encouragement to take risk improve their performance. Other factors such as toleration for non conformity, opportunity to work alone, monetary rewards and creativity training programmes are what Badawi (1989) claim can stimulate innovation and creativity among employees, and their neglect can result to what he regarded as “creativity mismanagement. Innovative and creative individuals are few and they operate groups and society. In most cases, it is their desire to excel in their groups and societies that motivate them to innovate. They find recognition among members of their groups majority of which their interest is mainly to work for livelihood. It is their membership of that enable them to know and measure others performance, which motivate them to excel others.

Innovative and creative individual tend to maintain their motivation to the extent that their desire to excel is given encouragement and a climate to operate. Industrial relations can be used to provide for individual and group needs and general improved working conditions that will enable employees to implement and operationalise their desire. Interactions between workers and with management generate their own excitement which Manners, et al. (1997) called “positive tension” that motivate innovative people. Many organizations have failed to survive globalisation challenges due to their inability to manage innate capability of their human resources to innovate.

They failed to exploit industrial relations systems for their organizational competitiveness and survival. They often placed emphasis on finance and technology. But in spite of all their efforts to establish a fully automated factory with complete elimination of human resource inputs, labour still determine the direction, maintenance and uses of technology in
all industries. Brooks and Macoby (1994) assert that highly automated production or computerized systems, whether in factories or offices cannot function without human interventions. “Technology is therefore human tools not his replacement. The most important resource in any organization is the human resource. The former British Steel Chief, Finniston once said:

Technological development has not made the human resources irrelevant. People are still the only appreciating asset in the business that you can challenge their desire and innate experience. All other assets disappear, you write them off. You depreciate them every year. In five years a machine is counted as nothing in the balance sheet, but your people count and age makes them experienced and gives them better judgment... The only appreciating resource that we have got is the talent and skills of the people to design, to manufacture, to produce and provide services... The starting point is always people. People create, communicate, initiate and manage ideas, which are the basis of the organisation (Ezra & Oates, 1989).

No meaningful progress can take place in any society without the development of the creative and innovative ability of her people. The creative capacity of human beings is at the heart of development process. What makes development happen is the ability of human beings to take risk, imagine, theorise, conceptualise, experiment, invent, articulate, organise, manage, solve problem and do a hundred other things with their minds and hands, which contribute to the progress of individual and human kinds (Aluko, 1993). Political elites should formulate and implement policies that will make it easy for their people to do all these for national development and organizational competitiveness.

Technological innovation and employee development and motivation are essential ingredients of productivity. It is necessary for an organisation to continuously embark on technological innovation and develop its personnel to cope with the emerging technologies. Any organisation that intends to remain viable and competitive in the present day global economy has no other choice than to be innovative and invest heavily on employee development.

Summary and Concluding Remarks

Employee relations practice enhances employees’ incentives and motivation and improves extrinsic environmental factors that affects working environment Otobo (2000). Industrial relations could also be used to stimulate technological innovation when combined with organisational planning and analysis of new technologies and with technological changes. It promotes effective communication and integration of all the units of research and development for the benefit of all parts of the organisation. Industrial relations could provide a better way of producing quality goods and services, by stimulating innovation in large number of employees and in every part of the business.

Organisations should provide conducive working environments and better rewards for employees and to develop and train them; which can motivate them to innovate. (Szell, 1992) Training of workers for their adaptation to the accelerating socio-economic, technological, demographical and other changes can also be integrated with industrial relations to stimulate technological innovation. The implications of these actions are the improved information
flow and relations between individuals and groups within the organisations.

These increases the number of the innovation, which organisations can exploit for their competitiveness and widen the coverage of those ideas that can further, stimulate employee technological innovation and creativity most especially in technology-driven organisations.

References