

Literature Review Report on-“Work-Life Balance of Loco-Pilots (Railway Drivers) in India”

Rajesh Ranjan* Dr. T. Prasad

National Institute of Industrial Engineering (NITIE), Vihar Lake, Mumbai-400087 (India).

*E-mail of the corresponding author: rajeshranjannitie@gmail.com

Abstract

The railway driver is exposed to a demanding psychosocial work environment, which includes solitary work, limited opportunities for social contact and a heavy responsibility for operating the train (in terms of both safety and adhering to the timetable). The railway driver's job, i.e. to operate the train, is largely governed by timetables and technical conditions (e.g. type of train, track area), which restricts the driver's ability to decide for himself how the job is to be done. Railway drivers struggle to fulfill work and family responsibilities. This struggle is due to long hours, irregular and inflexible work schedules, and heavy workloads. Thus, work-family conflict can be a common work stressor for railway drivers. This paper deals with the quality of work life of Indian railways' drivers and the factors that lead to an imbalance, causing high probability of accident. This paper discusses the working conditions and quality of life to the Indian railway drivers. This paper also briefly reviews concepts relevant to defining work-life balance. This review of literature deals with the Work-Life balance of an Indian railways' drivers to determine the working conditions and level of their work life balance which is having very high importance on their total wellbeing and hence their productivity and entire growth of an Indian railway.

Keywords: Railway driver, Working conditions, Stress and Work-life balance

1.Introduction of Loco-Pilots

1.1 Indian railways' driver

The job of a Railway Driver demands hard work and great presence of mind along with courage to handle diverse conditions. For this one should have discipline, patience, responsibility, punctuality, commitment, courage and above all self-confidence. The job requires lots of hard work, stamina, alertness of mind, adaptability to follow difficult time schedules too. But the main and remarkable, highly appreciable role of railway drivers is the only who works with full honesty, in day & night, in heavy cold, hot & rainy weather. Railways' Drivers / Loco-Pilots are the most important person in executing the huge task of transporting nearly 25 Million passengers and more than 2.8 Million Tons of freight daily with the help of 2,29,381 wagons, 59,713 coaches and more than 9,213 locomotive engines of various kinds(www.Indian railways, Wikipedia). To transport 25 million passengers and millions of tons of freight and that too with taking care of both the traveler's convenience and safety is not a mean task, the driver on whose sincerity the journey of a train depends. If he is not capable of carrying his responsibilities then the efforts of the other employees go waste, in this sense we can say that he is the most important person of the railways. Thus Railway Driver is one of the most important posts in the railway staff. Driver is also responsible to carry the train safely to its destination. In that sense he is one of the most important employees in the Railway. One has to be really dedicated and hardworking to handle this work. Railway drivers playing a key role in Indian Railway's safe & punctual running of trains with security and productivity (**Source:** Railway Driver, How to become a Railway Driver ... - Education India).

The work of the railway driver is demanding and full of responsibility. The railway driver is in- charge of both safety and punctuality, a job which requires a high level of concentration and alertness. The extremely irregular working hours constitute an added workload for the railway driver. The physical work environment can also give rise to workload; this includes, for eg; noise (or distressful noise levels), vibrations or an uncomfortable cab conditions (too hot, too cold, draughty). The railway driver is also exposed to a demanding psychosocial work environment, which includes solitary work, limited opportunities for social contact and a heavy responsibility for operating the train (in terms of both safety and adhering to the timetable). The railway driver's job, i.e. to operate the train, is largely governed by timetables and technical conditions (e.g. type of train, track area), which restricts the driver's ability to decide for himself how the job is to be done. Railway drivers struggle to fulfill work and family responsibilities. This struggle is due to long hours, irregular and inflexible work schedules, and heavy workloads. Thus, work-family conflict can be a common work stressor for railway drivers (Göran Kecklund et al; 1999).

1.2 Working conditions

At present Loco Pilots are classified under 'continuous' roaster. Not any calendar day rest provision. Normally the Loco Pilot has to work for 10 hours duty at a stretch and can demand relief after 12 hours with 2 hours prior

notice to controller (Singh Ravi Kant, 2008). (ILO regulation only 9 hrs upper limit +1 hrs extra in case of emergency duty) (FIRE Quarterly Magazine, Aug.2012).

There are no fix schedules during operating Goods train. It takes normally long duty hours (sometimes continues 10 hours or more). While operating Goods train, very long waiting time for returning his own H.Q./Home Station (It is sometimes 30 hours or more). Loco-Pilot must be waited for the train at the time of returning to his H.Q./Home Station. After 96 hours of Sign-Off Loco-Pilot demand the compulsory returning for his H.Q. with driving train or without driving train. There are no immediate returning schedules of loco-pilot. In any personal or family emergency loco-pilot can't leave the cab without Sign-Off. In any emergency loco-pilot called for duty at any time while he is in rest periods.

1.3 Cab conditions

The heavy noise, dust pollution, excess heat, high voltage electricity in the electric locomotive and diesel smell in the diesel locomotive are contributing to early fatigue to the crew. The noise level in a diesel locomotive is about more than 100 decibels which is 25 decibels more than **maximum allowed limit of 75 decibels by the Industrial Pollution Control Board**. The heat, diesel smell, noise from the engine room comes to the driving cab as the doors in the driving cab are not designed sound proof. To overcome this problem the locomotive cab has to be air-conditioned so that fatigue will not attack the drivers and they can concentrate on their duties properly and ensure safety of trains. (FIRE Quarterly Magazine, Aug.2012).

No natural calls facilities (no toilets available).

1.4 Personal/family related problems

Loco-Pilots are not giving (spending) more (sufficient) time with his family and societal activities.

- ❖ 100% housing should not be provided to drivers as they are residing up to 5-6 kms. away from their station of posting and are taking a lot of time in commuting. They are unable to get more than 10-12 hours of rest even at home station when they are provided 16 hrs. rest.
- ❖ All other railway employees get 12 National Holydays and 52 Sundays, guaranteed weekly rest but Loco-Pilot does not get any National Holyday. So, all the personal work has to be done by availing leave, or between short spells in between duties, which creates mental agony, losing concentration in running duties.
- ❖ No any calendar day rest provision, so that they may fulfill their family and social obligations. (FIRE Quarterly Magazine, Aug.2012).

2.Introduction and Definitions of Work-Life Balance

2.1 Work-life balance

In very past years, organizations looked at “work” and “life” as independent domains. Employees were expected to place the organizations’ interests ahead of their own. In the past, organizations react such as, “what happens to you outside the office is your own business; what you do in the office is our business.” With changing time, attitudes have changed. Organizations and managers today have come to accept the impact that work-life has on personal life and vice-versa. Recent years have seen a growing number of organizations operate under the assumption that personal life and work life are complementary to each other and not competing priorities. It helps employees balance their work lives with their personal life and leads to positive outcomes for the employee and the organization. Therefore, a growing number of organizations have begun to adopt “work-life (family) programs” or “family-friendly practices”. Work-life balance is the term used to describe those practices at work place that acknowledge and aim to support the needs of employees in achieving a balance between the demands of their family life and work lives.

Work-life balance is about adjusting work patterns to achieve overall fulfillment. A good work-life balance enables the organizations to thrive and at the same time enables the employees to easily combine work with other aspirations and responsibilities. Work-life balance should not be understood as suggesting an equal balance or scheduling equal number of hours for each of one’s work and personal activities. A positive work-life balance involves achievement and enjoyment. A good working definition of work-life balance may be meaningful daily achievement and enjoyment in each of the four quadrants of life - work, family, society and self. The best work-life balance varies for an individual over time. At different stages of career and age, different factors become important for an individual. The right balance for an individual today will probably be different tomorrow. For instance, the right balance for an individual when he/she is single will be different from when he/she gets married or when he/she is nearing retirement (Agarwala Tanuja, 2007).

“Work” is an instrumental element & is a means to support a way of life and to create optimal conditions for one’s family and/or one self. “Work”, however, also constitutes a socio-psychological element that creates respect and personal challenges. Thus, the work-life balance is also about managing internal pressure from one’s own expectations and setting realistic goals which do not inflict on family responsibilities. Originally, work was

a matter of necessity & survival. Today, work still is a necessity but it should be source of personal satisfaction as well (Parsons D, 2002).

The expression "work-life balance" was first used in the late 1970s to describe the balance between an individual's work and personal life in U.K. In the United States, this phrase was first used in 1986. As the separation between work and home life has diminished, this concept has become more relevant than ever before. Work-life balance is about people having a measure of control over when, where and how they work. It is achieved when an individual's right to a fulfilled life inside and outside paid work is accepted and respected as the norm, to the mutual benefit of the individual, organization and society (The work foundation). Work-life balance (WLB) is an important area of human resource management which is receiving increasing attention from policy makers, organizations, management, employees & their representatives globally (Alma McCarthy et al; 2010).

The concept of work-life balance is based on the notion that paid work & personal life should be seen less as competing priorities than as complementary elements of full life. Work-life balance is about improving people's quality of life & widening access to paid employment & career opportunities.

A work-life balance supports staffs who wish to have a greater involvement in public life & in the community (Simonetta Manfredi & Michelle Holliday, 2004).

Work-life balance is based on the assumption of the separation of work & private life, & that "balance" is achieved when there is equal division between the two (Sally Khallash & Martin Kruse , 2012). To be balanced is to approach each role, work & family-with an approximately equal level of attention, time, involvement, or commitment.

Greenhaus, offer the following definition of work-family balance: the extent to which an individual is equally engaged in- and equally satisfied with- his or her work role & family roles (Jeffrey H. Greenhaus et al; 2003).

Work-family balance as "satisfaction & good functioning at work & at home with a minimum of role conflict" (Clark, 2000).

According to Kofodimos, balance refers to "a satisfying, healthy, & productive life that includes work, play, & love..... (Kofodimos, 1993).

Work-life balance is an integral & important part of Corporate Social Responsibility. Good organizations need to recognize that part of their obligation to their employees are to ensure that they are not working so hard so as to damage their lives outside of work or lead to health problems. Companies need to understand that long hours may lead to lower motivation, moral, turnover & productivity of employees and reputation in the market. There has been recognition that happy employees are more productive and less likely to leave (Shalini Mahtani & Richard Welford, 2004).

It is widely recognized that employees who achieve a work life balance that suits them work more efficiently, are more committed to their organization & are less likely to become ill as a result of stress (www.athenaswan.org.uk).

According to Jim bird CEO Of "work life balance.com", work-life balance is meaningful achievement & enjoyment in everyday life."

Work-life balance is now a heavily researched area of interest. Work-life balance has always been a concern of those interested in the quality of working life and its relation to broader quality of life (Guest, 2002).

It is believed that balancing a successful career with a personal or family life can be challenging and impact on a person's satisfaction in their work and personal life's roles (Boers, 2005).

Dundas (2008) argues that work-life balance is about effectively managing the juggling act between paid work and all other activities that are important to people such as family, community activities, voluntary work, personal development and leisure and recreation.

(Greenhaus et al; 2003) define work-life balance as the extent to which an individual is equally engaged in – and equally satisfied with – his or her work role and family role. Thus, employees who experience high work-life balance are those who exhibit similar investment of time and commitment, to work and non-work domains.

2.2 Work-life imbalance

Kofodimos (1993) suggests that imbalance-in particular work imbalance-arouses high levels of stress, detracts from quality of life, and ultimately reduces individual's effectiveness at work. He expect that an imbalanced satisfaction between work and family roles can produce extensive stress because the imbalance is a constant reminder that one is not meeting his or her needs or values as extensively in one role as the other. Therefore, imbalance can produce sizable differences between work satisfaction and family satisfaction, a high level of stress, and therefore a low quality of life.

2.3 Life and job satisfaction

Life and job satisfaction are key constructs for this research. Life satisfaction generally refers to an individuals' overall well-being (Karatepe et al; 2008), and specifically reflects an individual's quality of life including physical and mental well-being, interpersonal relations, social activities, personal development, and fulfillment

and recreation (Johansson & Bernspang, 2003). On the other hand, job satisfaction is an employee's internal state of some degree of favorable or unfavorable feelings from affectively and/or cognitively evaluating his or her job experience (Brief, 1998).

2.4 Happiness

The conceptualization of happiness is a difficult endeavor. The question of the determinants of happiness is probably one of the oldest confronting mankind, as can be seen from the debates and proposals since antiquity, by, religion and philosophy. Nowadays, there are also answers from psychology, especially positive psychology. The first route to happiness is a pleasant life, “that successfully pursues the positive emotions about the present, past and future” (Seligman, 2002 & Seligman, 2003). The second route to happiness is an engaged life (Seligman et al., 2006). An engaged life consists of “using your strengths and virtues to obtain abundant gratification in the main realms of life” (Seligman, 2003). An individual can achieve this by developing her various strengths and virtues. A meaningful life is the third route to happiness (Peterson et al; 2005; & Seligman et al; 2004). A life is considered meaningful if it is based on a higher purpose than the person itself. Such ends consist of a variety of “positive institutions” (Seligman et al., 2006) as, for instance, religion, politics, family, community or nation (Seligman et al., 2006). Seligman (2002) states that to pursue all three routes to happiness simultaneously is the way to achieve the ultimate goal of “authentic happiness”, a full life. According to Seligman, this full life “consists in experiencing positive emotions about the past and future, savoring positive feelings from the pleasures, deriving abundant gratifications from your signature strengths, and using these strengths in the service of something larger to obtain meaning” (Seligman, 2002).

2.5 Quality of work-life

Quality of work life is a person's feelings about every dimension of work including, economic rewards & benefits, security, working conditions, organizational & interpersonal relationships and its intrinsic meaning in a person's life.

The American Society of Training & Development defined the concept of Quality of Working Life (QWL) is the degree to which members of a work organization are able to satisfy their personal needs through their experience in the organizations. Its focus of creating a human work environment where employees work cooperatively & contribute to organizational objectives (Chhabra T.N; 2010).

2.6 Work-life conflict

Work-Life Conflict is defined as “a form of interrole conflict in which the role pressures from work & personal life domains are mutually incompatible in some respect” (Chhabra T.N; 2010).

3. Review of the Literature on Work-Life balance

As there are relatively few published literature (studies) available on Indian railways' drivers work life balance. So, researcher has included studies of other nations and other occupations that are relevant to their research.

3.1 Previous studies on work-life balance

Drawing on the large amount of literature and research this chapter examines the concept of work-life balance. Fatigue and tiredness are essentially cumulative (Hildebrandt et al., 1974; Rosa, 1991). They are generated by excessive hours worked per day, too little time off between work shifts, and too many consecutive days worked without rest days (Paley and Tepas, 1994; Smith, 1979). Inadequate roster design and excessive overtime work hours are therefore particularly associated with fatigue. They are particularly associated with tasks requiring continuous monitoring (e.g. railway engine driving, motor vehicle driving & supervising chemical plants etc.), repetitive short-cycle tasks, tasks requiring fine motor skills, tasks requiring high levels of physical effort, and tasks undertaken in hot and humid environments (Rosa and Bonnet, 1993). Shift work is primarily associated with two occupational stressors: working unsocial hours; and fatigue. These stressors may result in performance errors which are typically manifested in increased product rejects, reduced product quality and increased workplace accidents and injuries. Excessive fatigue and family and social life disruption may also result in increased sickness absence, and lower job satisfaction and employee well-being.

Excessive fatigue and family and social life disruption may also result in increased sickness absence, and lower job satisfaction and employee well-being. Unsocial hours are generally linked to weekend work, evening & night work, and morning shifts that start very early (Colligan and Rosa, 1990; Smith, 1993; Wedderburn, 1967). They may disrupt normal family life (Barling, 1990) and also may impact on parental and partner roles (Barton et al., 1998; Bunnage, 1984; Repetti, 1989). They also disrupt social life and community involvement (Colligan and Rosa, 1990). Unsocial hours may also disrupt normal patterns of sleep, and thereby contribute to fatigue (Duchon et al., 1997; Tepas et al., 1997).

According to (Elisa J. Grant-Vallonea & Ellen A. Ensherb, 2001), employees reported higher levels of work interfering with their personal life, than personal life interfering with their work. Results demonstrated that work-personal life conflict was related to employees' depression & anxiety and personal-work life conflict was related to employees' concern for their health.

The impact of long hours and the perception that work is increasingly intense has a negative overall affect on individuals in terms of their physical and mental well being. (Dawson et al; 2001) have published an extensive review of the large body of well supported quantitative literature examining the consequences of long work hours on health and mental functioning. They suggest that the most prominent issue relates to fatigue and exhaustion because of insufficient recuperative sleep. This affects mental functioning as people may experience lapses in concentration, the inability to comprehend complex situations, and increases the likelihood of people engaging in risk-taking behaviours (Dawson et al; 2001). In addition, long working hours are also indirectly associated with negative health outcomes, including: high blood pressure and heart problems; excessive food and alcohol consumption; smoking; weight loss or gain associated with poor physical exercise, unbalanced nutrition and irregular meals; and illnesses induced by high levels of stress (Dawson et al; 2006; Jones et al; 2006; NZCTU, 2002; Pocock et al., 2001). This inevitably impacts on people's perception of their quality of life and general life satisfaction. Research findings, largely based on qualitative interviews, highlight that the pressures of work reduce opportunities for people to spend time with family, friends, or to peruse their own interests, which inevitably leads to the erosion of support networks and can lead to moodiness, loneliness and depression (Gambles et al; 2006; NZCTU, 2002, Pocock et al., 2001).

(Jeffrey H. Greenhaus et al; 2003) find out for individuals who invested substantial time in their combined work and family roles, those who spent more time on family than work experienced a higher quality of life than balanced individuals who, in turn, experienced a higher quality of life than those who spent more time on work than family. He observed similar findings for involvement and satisfaction. Positive balance suggests an equally high level of attention, time involvement, or commitment, whereas, negative balance refers to an equally low level of attention, time, involvement, or commitment. Positive balance implies an equally high level of satisfaction with work & family roles, & negative balance suggests an equally low level of satisfaction with each role (Clark, 2000; Kirchmeyer, 2000, Kofodimos, 1993). Their study confirmed the negative effect of work imbalance on quality of life and demonstrated that the deleterious effect is due to heightened levels of work-to-family conflict & stress. A balance engagement in work & family roles is expected to be associated with individual well-being because such balance reduces work-family conflict & stress, both of which detract from well-being (Frome et al; 1992). He suggested that an equally high investment of time & involvement in work & family would reduce work-family conflict & stress thereby enhancing an individual's quality of life.

(Nancy R. Lockwood, 2003) find out increasing levels of stress can rapidly lead to low employee morale, poor productivity, & decreasing job satisfaction. Other serious repercussions are depression, alcohols & drug abuse, marital & financial problems, compulsive eating disorders, & employee burnout.

(Hymant et al; 2003) indicated that intrusion of work demands into personal life (eg. working during the week-end) was related with reports of hightend stress & emotional exhaustion for employees. Furthermore, employees perceived that intrusion of work obligations into their personal lives negatively affected their health.

Work-life conflict arises from the incompatible emotional and behavioral demands of work and non-work roles, such that participation in one role is made more difficult by participation in the other (Greenhaus & Beutell, 1985). This conflict can result in greater stress at home or at work, poorer health, higher turnover and absenteeism, reduced job satisfaction, and less organizational commitment. The negative health effects of work life conflict include anxiety, depression, burnout, somatic complaints, raised cholesterol levels, and substance abuse (Frone, 2003).

(Laurent M. Lapierre, 2008) find out a casual process whereby employees working in an environment viewed as more family-supportive experience lower levels of WFC. Reduced WFC then translates into greater job and family satisfaction, followed by greater overall life satisfaction. They have reason to believe that a family-supportive work environment can potentially strengthen life satisfaction by reducing work-family incompatibilities that lessen their satisfaction at work and at home. This implies that employees' perceptions of their work environments' family-supportiveness may play a significant role in their overall level of enjoyment in life.

According to (T. Alexandra Beauregard & Lesley C. Henry, 2009), in terms of job attitudes, employees reporting high levels of both work-to-life & life-to-work conflict tend to exhibit lower levels of job satisfaction and organizational commitment.

(Haddon & Hede, 2009) find out that work interferes with home life more than home life interferes with work life, when it comes to time & energy. On the other hand, home life enables participants to regain energy lost from working.

Increasing workloads have pressurized employees to demonstrate their commitment to work in more obvious ways (Ishaya & Ayman, 2008). Consequently, a larger part of them have tented to be present at their work place for longer periods of time, thereby reducing the time for which they are available at home.

(Reimara Valk & Vasanthi Srinivasan , 2011) indicated that the multiple roles of women software professionals in India, the nature of the IT industry, and the socio economic context of India pose unique challenges for

achieving the work-family balance. Nevertheless, the majority of women in their study were able to “have it all” because of family support.

According to (Xinyuan (Roy) Zhaoa, 2011), When hotels with family friendly work environments provide sufficient support for work and family needs, employees are more likely to have high job satisfaction. When work and family mutually reinforce each other (i.e; family experiences enrich the contributions to work, and vice versa), employees have a more balanced life (Aryee et al; 2005).

(Merideth Ferguson et al; 2012) find out that work-family balance plays a mediating role in assisting social support’s contribution to both job & family satisfaction. (Hua Jiang, 2012) indicated that, when employees’ immediate supervisors respect their subordinates as individuals with unique characters and needs and treat the differently but fairly, employees perceive high levels of trust, commitment, satisfaction and control mutuality, moreover, employees when perceiving that they are treated fairly by their organizations develop quality relationships with their organization. This study also identifies fair formal procedures & policies used to make work-life decisions as a significant antecedent leading to high trust, commitment, satisfaction, & control mutuality that employees perceive.

3.2 Summary

Furthermore, after reviewing existing literature on work- life balance proposes a lack of balance can lead to many negative outcomes for instance stress, burnout, depression, and lower work contributions. The combination of work and family demands often leads to time pressure, stress and conflict. It is generally assumed that burnout is caused by a heavy workload, the increased mental demands of today’s’ jobs, and other work-related characteristics such as low levels of job autonomy and organizational support.

Work and family are the two most important domains in a person’s life and their interface has been the object of study for researchers world-wide. There is a felt need to balance and integrate family needs and career requirements. The ability to balance between workplace’s needs and personal life’s needs is perceived as an important issue among employees globally.

In summary, after reviewing of literature identified that Indian railway drivers had difficulties in balancing work, life, and social activities. The findings from this study suggest that contending with stressful situations in the workplace is a common occurrence for the railway drivers leading to deterioration in their quality of work and life. (Evans et al; 1999).

4. Gaps Analysis, Raised Research Issues and Conclusions

4.1 Gaps analysis

After reviewing the literature, there appears to be a limited amount of research studies available in regards to how Indian railway drivers manage work and personal life to achieve a balanced life. Internationally, work-life balance and the factors affecting quality of work-life for railway drivers have received considerable attention. However, when coming to India, there have been hardly any studies done to reflect the work-life of the Indian railway drivers. Very few studies have looked into work-life balance in connection with Indian railways’ drivers. Researches on work-family balance has been about 45 years, and achieved fruitful results in western countries. However, there are lot of cultural differences between India & western countries. Work and life issues are related to the context of living. So the study on work & life in Indian context is necessary. Furthermore, the previous researches focus on the work and family domain, however, life are not just work and family domain, but also other parts, such as friends, hobbies, community service & leisure.

However, through this study, researcher has tried to highlight the conditions of the Indian railway drivers, under which they have been consistently performing their duties. Hence, the present study tries to find, the quality of work life of the Indian railway drivers and their perception about the initiatives taken by the Indian railways’ to improve their life at work.

4.2 Raised research issues

After reviewing the literature, these are the main research questions raised:

1. How do Indian railway drivers experience their work environment in terms of Work-life balance?
2. How do work and family related factors influence the work-life balance of Indian railway drivers?
3. How Indian railway drivers manage their work, to achieve a balanced life?

Drawing upon the large amount of work-life balance literature, the present study aims to study how Indian railway drivers manage the competing demands of work & life.

There is a need for greater research in this area.

4.3 Conclusions

Since most of the previous literature on work-life balance pertained to the employees in the corporate sector, the present study aimed to shift existing literature of work-life balance into the emerging phenomenon of Indian

railway drivers. After literature review found that work-life balance is becoming increasingly important due to the enhanced demands of a 24 hour, 7 day work culture and longer working hours.

This study provided an in-depth look into the work-life of railway drivers. Indian railway need to work with researchers, trade unions, policy makers and railway drivers themselves, to formulate initiatives that safeguard railway drivers against work stress, so that the quality of their work- life could be improved. Even so, it is hoped that our study constitute not only valuable insights and attract the attention of the management (Indian Railway) towards the deteriorating condition of the railway drivers and highlight their work-life, but also provide a tentative starting point towards the greater understanding of current scenario under which the Indian railway drivers are performing their duty, so as to bring an improvement for the same.

References

- Alma McCarthy, Colette Darcy and Geraldine Grady, (2010), "Work-Life Balance Policy & Practice: Understanding Line Manager Attitudes & Behaviors", *Human Resource Management Review*, Vol. 20, pp. 158-167.
- Aloys Prinz and Bjorn Bunker (2012), "Balancing 'full life': An Economic Approach to the Route to Happiness", *Journal of Economic Psychology*, Vol. 33, pp. 58-70.
- Anne Pisarski, Sandra A. Lawrence, Philip Bohle and Christine Brook (2008), "Organizational Influences on the Work Life Conflict and Health of Shift Workers", *Applied Ergonomics*, Vol. 39, pp. 580-588.
- Agarwala Tanuja (2007), "Strategic Human Resource Management", Delhi, Oxford University Press, pp. 708-760.
- Aryee, S., Srinivas, E.S., and Tan, H.H. (2005), "Rhythms of life: Antecedents and Outcomes of Work-Family Balance in Employed Parents", *Journal of Applied Psychology*, Vol. 90, pp. 132-146.
- Anderson, S. E., Coffey, B. S., and Byerly, R. T. (2002), "Formal Organizational Initiatives and Informal Workplace Practices: Links to Work-Life Conflict and Job-Related Outcomes", *Journal of Management*, Vol. 28(6), pp.787-810.
- Åkerstedt, T., Fröberg, J. E., Friberg, Y. and Wetterberg, L. (1979), "Melatonin Excretion, Body Temperature and Subjective Arousal during 64 Hours of Sleep Deprivation", *Psychoneuro Endocrinology*, Vol. 4, pp. 219-225.
- Amitabh (2006), "Rail Accidents due to Human Errors-Indian Railways Experience", Ministry of Railways, ovt. of India.
- "Allotment of Railway Quarters and Retention thereof", Railway Board Letter No: E [G] 2006/QR1-6, dated: 20/04/2007, RBE No: 35/200.
- Barling, J. (1990), "Employment, Stress and Family Functioning", John Wiley and Sons, Chichester.
- Barton J., Aldridge, J.M. and Smith P.A. (1998), "The Emotional Impact of Shift Work on the Children of Shift Workers", *Scandinavian Journal of Work, Environment and Health*.
- Bunnage, D. (1984), "The Consequences of Shift Work on Family and Social Life. In Wedderburn", A.A.I. and Smith, P.A. (Eds), *Psychological Approaches to Night-and Shift work*, Heriot-Watt University, Edinburgh.
- Barbara Haddon & Andrew Hede (2009), "Work-Life Balance: Results of QLS Survey", Report to Queensland Law Society, University of the Sunshine Coast, Queensland, Australia
- Broers, CM (2005), "Career and Family: The Role of Social Support", Griffith University, PhD Thesis.
- Burke, R. J., and Greenglass, E. R. (1999), "Work-life Congruence and Work-life Concerns among Nursing Staff", *Canadian Journal of Nursing Leadership*, Vol. 12(2), pp. 21-29.
- Brief AP (1998), "Attitudes in and around Organizations", Thousand Oaks, CA: Sage.
- Colligan, M.J. and Rosa, R.R. (1990), "Shift Work Effects on Social and Family life", *Occupational Medicine: State of the Art Reviews*, Vol. 5, No. 2, pp. 315-22.
- Clark, S. C. (2000), "Work/Family Border Theory: A New Theory of Work/Family Balance", *Human Relations*, Vol. 53, pp. 747-770.
- Chhabra T.N. (2010), "Human Resource Management", Delhi, Dhanpat Rai & Co. (P) Ltd.pp.553-561.
- Dundas, K (2008), "Work-Life Balance: There is no 'one-size-fits-all' solution, in K O'Rourke (ed.)", *Managing Matters*. Graduate College of Management, Southern Cross University, New South Wales, Vol. 3, (Summer), pp. 7-8.
- Deery, M (2008), "Talent Management, Work-Life Balance and Retention Strategies", *International Journal of Contemporary Hospitality Management*, Vol. 20, no. 7, pp. 792-806.
- Demerouti, E., Bakker, A. B., Nachreiner, F., and Schaufeli, W. B. (2001), "The Job Demands Resources Model of Burnout", *Journal of Applied Psychology*, Vol. 86, pp. 499-512.
- Dawson, D., Roach, G., Reid, K., and Baker, A. (1998), "Australian Railroads Shift Work & Workload Study", Final Report: The Centre for Sleep Research, Australia.
- Dawson, D., McCulloch, K., and Baker, A. (2006), "Extended Working Hours in Australia: Counting the Costs", Retrieved 5 December, 2006 from the World Wide Web:

<http://www.dir.qld.gov.au/pdf/ir/extendedhours.pdf>.

- Duchon, J.C., Smith, T.J., Keran, C.M. and Keebler, E. (1997), "Psychophysiological manifestations of performance during work on extended shifts", *International Journal of Industrial Ergonomics*, Vol. 20, pp. 39-49.
- Dijk, D.J. and Czeisler, C. A. (1995), "Contribution of the Circadian Pacemaker and the Sleep Homeostat to Sleep Propensity, Sleep Structure, Electroencephalographic Slow Waves and Sleep Spindle Activity in Humans", *Journal of Neuro science*, Vol. 15(5), pp. 3526-3538.
- Dinges, D. and Kribbs, N. (1991), "Performing While Sleepy: Effects of Experimentally Induced Sleepiness", In T. Monk (Ed.), *Sleep, Sleepiness and Performance*, (pp. 97-128). Chichester: John Wiley & Sons Ltd.
- Elisa J. Grant-Vallone and Ellen A. Ensher (2011), "An Examination of Work and Personal Life Conflict, Organizational Support, and Employee Health among International Expatriates", *International Labour Office, Governing Body, 312th Session, Geneva, (November), GB.312/POL/4*.
- Evans, G. W., Johansson, G. and Rydstedt, L. (1999), "Hassels on the Job: A Study of a Job Intervention with Urban Bus Drivers", *Journal of Organizational Behavior*, Vol. 20, pp. 199-208.
- Elisa J. Grant-Vallone and Ellen A (2001), "An Examination of Work and Personal Life Conflict, Organizational Support, and Employee Health among International Expatriates", *International Journal of Intercultural Relations*, Vol. 25, pp. 261-278.
- Edkins, G. D. and Pollock, C. M. (1997), "The Influence of Sustained Attention on Railway Accidents", *Accident Analysis & Prevention*, Vol. 29, pp. 533-539.
- Frone, M.R. (2003), "Work-family balance", In: Quick, J.C., Tetrick, and L.E. (Eds.), *Handbook of Occupational Health Psychology*. APA, Washington, DC, pp. 143-162.
- Frone, M. R., Yardley, J. K., and Markel, K. S. (1997), "Developing and Testing an Integrative Model of the Work-Family Interface.", *Journal of Vocational Behaviour*, Vol. 50, pp. 145-167.
- Frone, M. R., Russell, M. and Cooper, M. L. (1992), "Antecedents and Outcomes of Work Family Conflict: Testing a Model of the Work-Family Interface", *Journal of Applied Psychology*, Vol.77, pp. 65-78.
- Frone, M. R., Russell, M., and Barnes, G. M. (1996), "Work-life Conflict, Gender, and Health-Related Outcomes: A Study of Employed Parents in Two Community Samples", *Journal of Occupational Health Psychology*, Vol. 1(1), pp. 57-69.
- FIRE Quarterly Magazine (Aug.2012), All India Loco Running Staff Association.
- Greenhaus, J.H., Beutell, N.J., (1985), "Sources of Conflict between Work and Family Roles", *Acad. Manage. Rev.* Vol. 10, pp. 76-88.
- Greenhaus, J. H. and Beutell, N.J. (1985), "The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance", *Academy of Management Journal*, Vol. 38 (3), pp. 635-672.
- Greenhaus, JH, Collins, KM and Shaw, JD (2003), "The Relation between Work-Family Balance and Quality of Life", *Journal of Vocational Behavior*, Vol. 63, pp. 510-31.
- Gambles, R., Lewis, S., and Rapoport, R. (2006), "The Myth of Work-life Balance: The Challenge of Our Time for Men, Women and Societies", West Sussex, England: John Wiley & Sons.
- Guest, DE (2002), "Perspectives on the Study of Work-life Balance", *Social Science Information*, Vol.41, No. 255, pp.255-79.
- Goran Kecklund, Torbjorn Akerstedt, Michael Ingre and Marie Soderstrom (1999), "Train Drivers' Working Conditions and Their Impact on Safety, Stress and Sleepiness: A Literature Review, Analyses of Accidents and Schedules", National Institute for Psychosocial Factors and Health, Department of Public Health Sciences, Division for Psychosocial Factors and Health, Karolinska Institutet, Stockholm, Sweden.
- Govt. of India, Ministry of Railways, Indian Railways Corporate Safety Plan (2003-13), August 2003, HOER (Hours of Employment and Period of Rest rules 2005).
- Hyman, J., Baldry, C., Scholarios, D. and Bunzel, D. (2003), "Work-life Imbalance in the New Service Sector Economy", *British Journal of Industrial Relations*, Vol. 41, pp. 215-39.
- Hildebrandt, G., Rohmert, W. and Rutenfranz, J. (1974), "12 and 24 Hour Rhythms in Error Frequency of Locomotive Drivers and the Influence of Tiredness", *International Journal of Chronobiology*, Vol. 2, pp. 175-80.
- Helen De Cieri, Barbara Holmes, Jacqui Abbott and Trisha Pettit (2002), "Work/Life Balance Strategies: Progress and Problems in Australian Organizations", Working Paper 58/02, (November).
- Heitmann, A., Aguirre, A., Trutschel, U., Imrie, A. and Moore-Ede, M. (1997), "Can Freight Train Drivers Adapt Their Sleep Pattern to a 24-Hour Operation?" *Shift work International Newsletter*, 14, 80.
- Hailin Qu and Xinyuan (Roy) Zhao (2012), "Employees' Work-Family Conflict Moderating Life and Job Satisfaction", *Journal of Business Research*, Vol. 65, pp. 22-28.

- Hannunkari, I., Järvinen, E., & Partonen, T. (1978), "Work Conditions and Health of Locomotive Engineers. Questionnaire Study, Mortality and Disability", *Scand J Work Environ Health*, Vol. 4 (suppl. 3), pp. 15-28.
- Hua Jiang, (2012), "A Model of Work-life Conflict and Quality of Employee-Organization Relationships (EORs): Transformational Leadership, Procedural Justice and Family-Supportive Workplace Initiatives", *Public Relations Review*, Vol. 38, pp. 231-245.
- Ishaya, N., and R. Ayman (2008), "Predicting Work-family Conflict via Perceived Involvement and Overload", Boston, ma: American Psychological Association.
- Indian Railway Establishment Manual (Vol.-I), Chapter -I, Sec.-B, Sub.Sec I, II, &III. Recruitment & training of staffs.
- India Railway Manual of AC Traction (Vol-3), Ch. - VI- Operation of Locomotive.
- Indian Railway Establishment Manual (Vol-1); Chapter-XIII, Reimbursement of Medical Expenses Rule.
- Indian Railway Establishment code (Vol-1), Master circular No. 25,
- Absorption of Medically De-categorized Non-gazetted Staff in Alternative Jobs.
- Jones, F., Kinman, G., and Payne, N. (2006), "Work Stress and Health Behaviours: A work-life Balance Issue. In F. Jones, R.J. Burke & M. Westman (Eds.)", *Work-life Balance: A Psychological Perspective* (pp.185-215). East Sussex: Psychology Press.
- Joanna Hughes and Nikos Bozionelos (2007), "Work-life Balance as Source of Job Dissatisfaction and Withdrawal Attitudes: An Exploratory Study on the Views of Male Workers", *Emerald Group Publishing Limited*, Vol. 36, No. 1, pp. 145-154.
- Jeffrey H. Greenhaus, Karen M. Collins, and Jason D. Shaw (2003), "The Relation Between Work-family Balance and Quality of Life", *Journal of Vocational Behavior*, Vol. 63, pp. 510-531.
- Johansson U, Bernspang B (2003), "Life Satisfaction Related to Work Re-entry after Brain Injury: A Longitudinal Study", *Brain Injury*, Vol. 17, pp. 991-1002.
- Kimberly Fisher & Richard Layte (2002), "Measuring Work-life Balance and Degrees of Sociability: A Focus on the Value of Time Use Data in the Assessment of Quality of Life", *EPAG Working Papers No. - 32*.
- Kofodimos, J. R. (1993), "Balancing Act", San Francisco: Jossey-Bass. West Sussex, UK: Wiley.
- Khairunneezam Mohd Noor (2011), "Work-Life Balance and Intention to Leave among Academics in Malaysian Public Higher Education Institutions", *International Journal of Business and Social Science*, Vol. 2 No. 11 [Special Issue - June 2011]
- Karatepe OM, Kilic H & Isiksel B (2008), "An Examination of the Selected Antecedents and Outcomes of Work-Family Conflict and Family-Work Conflict in Frontline Service Jobs", *Service Marketing Quarterly*, Vol. 29, pp. 1-24.
- Kolmodin-Hedman, B., and Swensson, Å. (1975), "Problems Related to Shift Work. A field Study of Swedish Railroad Workers with Irregular Work Hours", *Scand J Work Environ And Health*, Vol. 1, pp. 254-262.
- Kogi, K., and Ohta, T. (1975), "Incidence of Near Accidental Drowning in Locomotive Driving During a Period of Rotation", *J Hum Ergol*, Vol. 4, pp. 65-76.
- Kirchmeyer, C. (2000), "Work-life Initiatives: Greed or Benevolence Regarding Workers Time", *Trends in organizational behavior*, Vol. 7, pp.79-93.
- Kossek, E. E.and Ozeki, C. (1998), "Work-family Conflict, Policies, and the Job-life Satisfaction Relationship: A Reviewand Directions for Organizational Behavior-Human Resources Research", *Journal of Applied Psychology*, Vol. 83(2), pp.139-149.
- Kinnunen, U., and Mauno, S. (1998), "Antecedents and Outcomes of Work-life Conflict among Employed Women and Men in Finland", *Human Relations*, Vol. 51(2), pp. 157-177.
- Lieke L. Ten Brummelhuis, Tanja Van Der Lippe, Esther S. Kluwer, and Henk Flap (2008), "Positive and Negative Effects of Family Involvement on Work-related Burnout", *Journal of Vocational Behavior*, Vol. 73, pp. 387-396.
- Laurent M. Lapierre, Paul E. Spector, Tammy D. Allen, Steven Poelmans ,Cary L. Cooper, Michael P. O'Driscoll, Juan I. Sanchez, Paula Brough and Leigh-Ann Harris and Barry Foster, *The Drivers of Work-life Balance: A Critical Review*.
Available at: www.google scholar (accessed 09/12/2012)
- Lauber, J. K.and Kayten, P. J. (1988), "Sleepiness, Circadian Dysrhythmia, and Fatigue in Transportation System Accidents", *Sleep*, Vol. 11, pp. 503-512.
- Mohd Noor, K, Stanton, P and Young, S (2009), "Work-life Balance and Job Satisfaction: A Study among Academics in Malaysian Higher Education Institutions", Paper presented to The 14th Asia Pacific Management Conference 2009, Surabaya, Indonesia.
- MacEwen, K. E. and Barling, J. (1994), "Daily Consequences of Work Interference with Family and Family Interference with Work", *Work and Stress*, Vol. 8, pp.244-254.

- Myrtek, M., Deutschmann-Janicke, E., Strohmaier, H., Zimmermann, W., Lawrenz, S., Brügger, G., and Müller, W. (1994), "Physical, Mental, Emotional, and Subjective Workload Components in Train Drivers", *Ergonomics*, Vol. 37, pp. 1195-1203.
- Merideth Ferguson, Dawn Carlson, Suzanne Zivnuska and Dwayne Whitten (2012), "Support at Work and Home: The Path to Satisfaction through Balance", *Journal of Vocational Behavior*, Vol. 80, pp. 299-307.
- Netterstrøm, B., Paludan, L., & Laursen, P. (1981), "Lokomotiv Personalets", *Arbejdsmiljø ved DSB (Arbejdsmiljøfondet, Danmark): Institut for Social Medicin, Københavns Universitet*.
- New Zealand Council of Trade Unions (NZCTU) (2002) *Thirty families: Interim report of the Thirty Families, Project: The impact of work hours on New Zealand workers and their families*. Available at: http://www.union.org.nz/policy/1027290655_21731.html (accessed 10 April, 2006)
- Nancy R. Lockwood (2003), "Work/Life Balance: Challenges and Solutions", *SHRM®Research Quarterly*.
- Niharika Doble and M.V. Supriya, (2010), "Gender Differences in the Perception of Work-Life Balance", *Management*, Vol. 5 (4), pp. 331-342.
- Peter A. Smith, Alexander A.I. Wedderburn, (1998), "Flexibility and Long Shifts", *Employee Relations*, Vol. 20 Iss: 5 pp. 483 - 489.
- Paley, M. and Tepas, D.I. (1994), "Fatigue and the Shift Worker: Fire Fighters Working on a Rotating Shift Schedule", *Human Factors*, Vol. 35, pp. 269-84.
- Parsons, D. (2002), "Work-Life Balance... A Case of Social Responsibility or Competitive Advantage?" *Human Resources Dept, Georgia Institute of Technology*.
- Peterson, C., Park, N., and Seligman, M. E. P. (2005b), "Orientations to Happiness and Life Satisfaction: The Full Life versus the Empty Life", *Journal of Happiness Studies*, Vol. 6, pp. 25-41.
- Pocock, B., Van Wanrooy, B., Strazzari, S. and Bridge, K. (2001), "Fifty Families: What Unreasonable Hours are Doing to Australians, Their Families and the Communities", *A Report Commissioned by the Australian Council of Trade Unions*. Australian Council of Trade Unions: Melbourne.
- Promotion of non-gazetted staff in loco running cadre – posts of Goods Driver redesignated as Loco Pilots [Goods]. (RBE No: 101/08, 12/09/2008,)
- Repetti, R.L. (1989), "Daily Job Stress and Father-Child Interaction", Paper Presented at the Biennial Meeting of the Society for Research in Child Development, Kansas City, MO.
- Rosa, R.R. (1991), "Performance, Alertness and Sleep after 3-5 Years of 12 h Shifts: A Follow-up Study", *Work and Stress*, Vol. 5 No. 2, pp. 107-16.
- Rosa, R. and Bonnet, M.H. (1993), "Performance and Alertness on 8 h and 12 h Rotating Shifts at a Natural Gas Utility", *Ergonomics*, Vol.36 No.10, pp. 1,177-93.
- Rajib Lochan Dhar (2008), "Quality of Work Life: A Study of Municipal Corporation Bus Drivers", *the Journal of International Social Research*, Volume 1/5, pp. 252.
- Rumi Dasgupta and Amishi Arora (2011), "Analysis of Work Life Balance: A Study at the Targeted Corporate Sectors in and Around Nagpur with a Small Number of Samples", *IJRIM*, Vol. 1, No. 8 (December).
- Richard Welford and Shalini Mahtani (2004), "Work-Life Balance in Hong Kong", *Survey Results, Corporate Environmental Governance Programme, University of Hong Kong*.
- Reimara Valk and Vasanthi Srinivasan (2011), "Work-Family Balance of Indian Women Software Professionals: A Qualitative Study", *IIMB Management Review*, Vol. 23, pp. 39-50.
- Russell, G. and L. Bowman (2000), "Work and Family, Current Thinking, Research and Practice", Prepared for the Department of Family and Community Services as a Background paper for the National Families Strategy.
- Smith, P.A. (1979), "Shift work: Balancing Sleep, Fatigue and Wakefulness", *Archives of Industrial Hygiene and Toxicology*, Vol. 30, pp. 1,385-93.
- Simonetta Manfredi and Michelle Holliday (2004), "Work-Life Balance: An Audit of Staff Experience at Oxford Brookes University", *The Centre for Diversity Policy Research, Oxford Brookes University*.
- Smith, P.A. (1993), "I've Worked Shifts in the Blast Furnace for 15 Years – So What Can You Tell Me About OHS?" in Quinlan, M., (Ed.), *Work and Health: Critical Readings on the Origins, Management and Negotiation of Occupational Health*, Macmillan, Melbourne.
- Sumit Prakash, Purushottam Khapre, Subrata K Laha and Nishant Saran, (2012), "Study to Assess the Level of Stress and Identification of Significant Stressors among the Railway Engine Pilots", *Department of Psychiatry, Central Hospital, South East Central Railway (SECR), Bilaspur, Chhattisgarh, India, Date of Web Publication 24-Feb-2012*.
- Sally Khallash and Martin Kruse (2012), "The Future of Work and Work-Life Balance 2025", *Future*, Vol. 44, pp. 678-686.
- Sturges, J. and Guest, D. (2004), "Working to Live or Living to Work? Work/life Balance Early in the Career", *Human Resource Management Journal*, Vol. 14(4), pp. 5-20.

- Seligman, M. E. P. (2002), "Authentic Happiness – Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment", New York: Free Press.
- Seligman, M. E. P. (2003), "Positive Psychology: Fundamental Assumptions", *Psychologist*, Vol. 16, pp. 126–127.
- Seligman, M. E. P., Parks, A. C., and Steen, T. (2004), "A Balanced Psychology and a Full Life", *Philosophical Transactions of the Royal Society of London B*, Vol. 359, pp. 1379–1381.
- Seligman, M. E. P., Rashid, T. and Parks, A. C. (2006), "Positive psychotherapy", *American Psychologist* (November), pp. 774–788.
- Sharma P.C & Amitabh (2004), "Safety as Key Business Theme! -Indian Railways Perspective", International Railway Safety Conference, Perth, Australia.
- Singh Ravi Kant, (2008), "Life of an Assistant Loco Pilot (ALP)/Assistant Driver", All India Loco Running Staff Association (Posted on Web).
Available at: Google (accessed 12/12/2012).
- Theorell, T. (1997), "Psychosocial factors in the work environment - an occupational medicine perspective", In H. A. Waldron & C. Edling (Eds.), *Occupational Health Practice*. Oxford: Butterworth & Heinemann.
- Tepas, D.I., Paley, M. and Popkin, S. (1997), "Work schedules and sustained performance", in Salvendy, G. (Ed.), *Handbook of Human Factors and Ergonomics*, 2nd ed., John Wiley and Sons, New York, Chichester, Brisbane, pp. 1,021-58.
- T. Alexandra Beauregard and Lesley C. Henry, (2009), "Making the Link between Work-life Balance Practices and Organizational Performance", *Human Resource Management Review*, Vol.19, pp. 9–22.
- Ulla Kinnunen (2008), "Family-Supportive Organization Perceptions, Multiple Dimensions of Work–family Conflict, and Employee Satisfaction: A Test of Model Across Five Samples", *Journal of Vocational Behavior*, Vol. 73, pp. 92–106.
- Virick, M, Lily, JD and Casper, WJ (2007), "Doing More with Less: An Analysis of Work life Balance among Layoff Survivors", *Career Development International*, Vol. 12, No. 5, pp. 463-80.
- Wedderburn, A.A.I. (1967), "Social factors in satisfaction with swiftly rotating shifts", *Occupational Psychology*, Vol. 41, pp. 85-107.
- White Paper- Safety on Indian Railways, April 2003, Govt. of India, Ministry of Railways.
- Xinyuan (Roy) Zhaoa, Hailin Qub, & Richard Ghiselli (2011), "Examining the Relationship of Work–family Conflict to Job and Life Satisfaction: A case of Hotel Sales Managers", *International Journal of Hospitality Management*, Vol. 30 , pp.46–54.

Websites

- www.worklifebalance.com, Inc.
- www.athenaswan.org.uk.
- www.Indian railways, Wikipedia
- [www.indian railway driver information, 2012, "Railway Driver- How to become a railway driver"](http://www.indian railway driver information, 2012,).
- [Indian Railways Online Official site \(www.indian railway information.gov.in\)](http://Indian Railways Online Official site (www.indian railway information.gov.in)).
- www.indian railway.gov.in
- List of Indian rail incidents - Wikipedia, the free encyclopedia

This academic article was published by The International Institute for Science, Technology and Education (IISTE). The IISTE is a pioneer in the Open Access Publishing service based in the U.S. and Europe. The aim of the institute is Accelerating Global Knowledge Sharing.

More information about the publisher can be found in the IISTE's homepage:

<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

The IISTE is currently hosting more than 30 peer-reviewed academic journals and collaborating with academic institutions around the world. There's no deadline for submission. **Prospective authors of IISTE journals can find the submission instruction on the following page:** <http://www.iiste.org/journals/> The IISTE editorial team promises to review and publish all the qualified submissions in a **fast** manner. All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Printed version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Recent conferences: <http://www.iiste.org/conference/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

