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WORK AND THE ARTICULATION OF OCCUPATIONAL IDENTITY IN AN OIL REFINERY, NIGERIA: LABOUR PROCESS EVALUATION

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ABSTRACT

This paper evaluates work process in an Oil Refinery, in Nigeria, and its implications for occupational identity and collective competence of work activity, among the refinery's plant process operators. A "contextualized" social process analysis of collective competence is deployed, which is cast within the understanding of implications of work process and skill formation around occupational identity; as existing among the plant operators in the Oil Refinery. Theoretical and conceptual reviews, done here, help to highlight the significance, and the articulation of collegiality of "occupational hegemonic" norms in the refinery, which also explains the collective orientation and articulation of "collectives", (occupational identity) along lines of work process within the refinery's plant operation groups. In the context of work process in the Refinery, the embedded "ways of doing things", articulated through collective occupational knowledge, and its manifestation, offers explanation for collective actions in form of work orientation, with distinctive labour process understanding. This contextual evaluation forms part of our ethnographic study of an Oil Company in Nigeria, which analysed the dimensions and implications of collective occupational knowledge of plant operators, at the Refinery's level.

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1. INTRODUCTION

Conceptual and theoretical analyses within the context of employment relations continue to illustrate the dimensions of workers experience and sense-making of specific types of managerial practices in the workplace. This has been conceptualised and analysed through diverse strands of labour process theory. Analysis and understanding of workers experiences in the refinery and their responses to workplace managerial practices in the organisation, conceptualised through the diverse strands of labour process analysis, have also provided empirical illustration of workers sense-making of the management's practices. In the context of work processes in the Oil refinery, skill formation around occupational identity has emerged as part of specific managerial dimensions on plants operation in the refinery. Theoretical and conceptual analysis and review, in context, provide a nuanced understanding of workers sense-making of occupational identity-formation in the refinery.

Through the analysis, an attempt has been made to concretely locate the diverse patterns of managerial discourse and practices within these conceptual approaches. More specifically, critical analysis within the labour process strand has been able to make insightful connections between labour process, workers' experiences and management's learning programmes. Post-structuralist evaluations have also provided the link between management's learning programme and "identity-work" in the workplaces, for instance, (Alvesson and Willmott 2002). In particular, the concept of "identity-work" and its regulation through managerial discourses and practices has offered a somewhat different understanding of managements' development programmes, and through which workers construct and enact their workplace identity; thereby giving (re)interpretations to the managerial and symbolic importance of managements' initiated training programmes (Gagnon, 2008). The Sections of the Paper are organised along these lines. In what follows here as Section 2, background information on the research site is provided. Following this, the Paper reviews literature on conceptual remits of "occupational identity" and "skill-formation" to illustrate workers "interests-articulation" in the refinery. The Conclusion provides the implications of the review for further empirical study on "occupational-identity" formation, in contemporary workplace.

2. RESEARCH SITE

The Nigerian National Petroleum Corporation (NNPC) was established in April 1977 by the Federal Government of Nigeria with the mandate to manage the operational aspects of the oil industry in Nigeria, while the regulatory functions reside with the Federal Government. The NNPC is a successor organization to the Nigerian National Oil Company (NNOC), which was established in 1971. In addition to its exploration activities, NNPC developed operational interest in refinery, petrochemicals and product transportation as well as marketing. Thus, between1978 and 1989, NNPC constructed petroleum and petrochemical refineries in Warri, Kaduna, and Port-Harcourt (NNPC 2007). However, in the last two and half decades, the Nigerian National Petroleum Corporation (NNPC); one of the largest federally owned corporations in Nigeria, has emerged from one of the far-reaching organizational changes in its near forty year history. In 1978, the corporation was decentralized into twelve strategic business subsidiaries and units, covering the entire spectrum of the corporation's operation. This has entailed making the corporation responsible for the commercial aspects of oil and gas activity. Also, as part of efforts to put NNPC on a more commercial footing, the Federal government in March 1988 introduced a new structure for the corporation. The aim, as stated by the Federal government was to see the NNPC as a "financially autonomous" and "commercially integrated" company.

Accordingly, three new areas of responsibility were initiated for the corporation: Corporate Services, Operations and Petroleum Investment (NNPC 2007). In 1989, two additional SBUs were established: the Integrated Data Services Company (IDS), and Eleme Petrochemicals Company which was established and commissioned "to provide the basis for the expansion of a petrochemicals and plastics industry" (International Directory of Company History, 2005:3 Vol. 172). Also, between 1978 and 1989, the NNPC constructed refineries in Warri, Kaduna and Port-Harcourt (NNPC 2007). The activities and operations of the refineries fall under what is referred to as Downstream Operations of the NNPC, which cover oil/gas conversion into refined and petrochemical products. As an autonomous Federal Government-owned corporation, NNPC is regulated by the Department of Petroleum Resources (DPR) - a Department within the Ministry of Petroleum Resources (NNPC 2007). Over the years, the operations and activities of NNPC have centred on coping with challenges of dealing with developments in the oil industry, particularly with regards to its products. The concern has been how to make its products compete favourably in the world market, both in terms of pricing and quality. As a result, the business units and subsidiaries of the State Owned Oil firm have been reorganized "unbundled" into companies with NNPC as a holding company.

Port Harcourt Refinery Company PHRC, Eleme (research site for this study), is one of the twelve subsidiaries of NNPC. It provides a petroleum refinery service to the country. It produces petroleum products. The operations and activities of the company are carried out by two Departments within the company: Production, Engineering, and Total Quality Control Department; and Administrative, Personnel and Manpower Development Department (NNPC2007). Within the context and rhythms of work processes and managerial practices in the Corporation, there have been considerable impacts and implications of occupational-identity formation on employment relations, especially at the "shopfloor" (refineries levels), where the influences of labour processes are more immanent. Labour process implications of the managerial practices that shaped this dimension are the scholarly concerns of this study. In particular the study is concerned with lived experiences of workers and their explanations of the labour process regarding the accompanying managerial practices, given the peculiarities of the State Owned Enterprise within the Nigerian peripheral capitalist mode of production. As a State Owned Enterprise, the Corporation contributes significantly to the Nigerian socio-economic development. The study is thus specifically inspired by the realization that NNPC as a "state-capital", do sustain the collective socioeconomic interest of the citizens of Nigeria. The work experience of workers in this context, their interpretations, and indeed their orientation is therefore the focus of this study. Within the regulatory framework that established the NNPC, operational activities at the refineries levels are expected to respond to the 'un-bundling' at the corporate level. The nature and patterns of work relations at the interfaces thus become important. This is because "it is at the factory level that the formation of workers consciousness and its manifestation are clearly shown in response to the production process'' (Adesina 1989:2-3). Activities at the shopfloor "reflect workers perception and explanations of their locations in the production relations'' (Adesina 1989:2). Questions therefore persist on the need to examine and analyse workers' experiences within the context of the refinery's labour process.

2.1 Work and Occupational Identity in the Refinery: A Conceptual Underpinning

Utilizing Abhaya's (1997) model of "psychological home", occupational knowledge and identity is conceptualized as "a familiar environment, a place where we know our way around, and above all, where we feel secure" (cited in Brown 2004:245). It is the sense of ease and control that define the "hegemonic orientation" and collective-identity the plants' (refinery) operators attached to their skill and occupation. Dewey, (1916), had for long seen occupation as "giving direction to life activities, and as a concrete representation of continuity" (Cited in Brown 2004:245). Thus, the social and psychological anchorage provided by such occupational norms and orientation gives meaning to work in its collectives, which also shapes occupational interests and its articulation by plant operators, in the refinery.

At one level, theorising occupational identity this way provides the conceptual approach for understanding identity and the meaning, the plant operators placed on their skills and occupation, and which also provides lines of demarcation and differences exhibited by them. Coffey and Atkinson 1994; Evans and Heinz 1994; model of "occupational socialization"(in Brown 2004:245) have also offered how occupational identity and demarcation have been utilized by workers as processes

for defining "inclusion" and "exclusion" and the type of occupational commitment (collective), exhibited by the workers within the solidarity, and also to the organisation. Lave 1993; Wenger 1998; and Billet 2004; in Brown 2004:246, have also utilized the concept of "processes of skill acquisition" within a work group to explain how individuals have increasingly become "active participant in the creation of a new "community of practice" which underscore their occupational identity and practices.

Browns (1997) model of "occupational-identity formation" (in Brown 2004:246) upon which themes such as, work processes and in which work activities are embedded is utilized here. The model also talked about the issues of social relations at work, and issues of continuous learning and developments for skill formation, all serve as theoretical cornerstone for exploring and explaining dimensions and manifestations of occupational identity in the refinery. This theoretical construct is also utilized in the context of work process in which individual employees attached importance and concern to implications such as "job sustainability, skills utilization and the implications of shifting dimensions of career development" in the organisation (Heinz 2002 cited in Brown 2004:246). Heinz (2002) had also looked at how the processes of occupational identity formation have shaped "biography" of individual worker in terms of "career importance". Our analysis here is thus concerned with occupational identity as "agentic orientation" of workers in their collective, within the refinery operating environment. As noted by Brown 1997; Ibarra 2003, "sources of occupational identity formation are diverse and multi-faceted shaped by issues such as the specific character of the work group itself in terms of levels of skills, and the particular work environment" (cited in Brown 2004:246). This may be referred to as the embedded "ways of doing things", the work processes and the engendered social relations at work. The type and degree of importance attached to these processes shape workplace occupational identity.One of the significant dimensions for understanding how the Refinery have been responding to operating challenges, and the need for improved performance have been through the processes of knowledge and competence building. The Refinery puts strong emphasis on the use of institutional framework for learning and development as means for achieving the competence-base for the corporation (NNPC 2007). Boreham's (2004) models of "collective competence" and "work process knowledge" provide bases for understanding how the Refinery have been able to build on its competence-base, and skill formation of the workforce. Boreham's (2004) conceptualisation also resonates with the importance NNPC attached to teamwork and practices in the corporation.

Workers enactment of collective role and occupational identity within a team is understood to go beyond individual employee within the team, and which also allows an appreciation and understanding the "collective-sense" in responding to the challenging situations. To Boreham (2004:1) the capacity of a work team to construct collective understanding and competence to meet organisational challenges "depends on building and making use of the "collective knowledge" and the engendered "lateral interdependency" within the work group that is equally deployed by the workers to make sense and respond to wide range of work activities and work processes. In utilizing much of these theoretical strands, it is here being demonstrated that workers in the Refinery have been able to utilize their "collective competence" to enact workplace collaboration and "cross-boundary" roles-activity in their performance of plant operations. In the context of plant operation processes in the refinery, knowledge of plant process is essential to collective competence, and this is referred to as "operations knowledge" directly deployed for work performance. Such operations knowledge is enacted and demonstrated at the "point of production", typically utilized in solving plant process operation problems. Thus, going by Boreham's (2004:1), it also involves not only "tacit knowledge, but also "experiential knowledge acquired on the job".

Contained in divers literatures on "shopfloor-collectives" (refinery) of work process are conceptualisations concerning the generation of group cohesions and solidarity in meeting challenges facing the group. For instance, Collinson (1992), Willis (1979), Darlington (1998), Hall et al. (2007) and Salaman (1986) have all shown how teamwork processes on the "shopfloor" have become bases around which occupational solidarity remain the platform for carrying out plant operations. Implicit in the shopfloor collective is the ability of members to channel their individual and collective competence regarding work activity. Shopfloor collective therefore provides the "pivot" for meeting operational challenges in the refinery, and for confirming individual competence in terms of socio-technical ability. Occupational sub-cultures in the process plants create work solidarity that cut across skills formation, engendering a "group unity" and "collegial mutuality" in solving operational problems. Shopfloor occupational sub-culture is here understood to mean complex, but "shared assumptions" which underpin processes of collective activity of the process operations in the Refinery. And it is in this social process that occupational identities are formed. As argued by Brown (1997), the processes of forming occupational identities are "socially situated", and contextually embedded with work process in the operation plants. These processes also take on the "agentic characteristics" of the individuals in the social process of work activity. Re-interpreted as "community of practice", occupational identity formation is seen as "relational social process" through which skills formation takes place "within a broader process of identity formation" (Brown 1997:4). In this process of occupational identity formation, there is "interdependence of structure and agency" through "which individual employees assume the roles and identities that are pre-existent" (Brown 1997:4). Nevertheless, scopes exit for these individuals to bring into bear, their "biography" and "agency" in acting upon "the structures and processes" (Brown 1997:5) in shaping both their skills and workplace identity.

2.2 "Agentic Engagement" of Individuals in the Construction of Occupational Identity

In the context of the dynamic work practices and processes, particularly as this concerns process operations in the Refinery, individual employees demonstrate active involvement in the construction of their own occupational identity. Building on Brown's (1996, 1997) dynamic model of occupational identity formation, it is here argued that individual workers in the process plant are themselves active in enacting their work identity, and this shapes how they perceive development in the work process in the process plant. "Identity" at work is not just being a worker doing his own bits, "but is all bound up with other factors that are also co-active in constructing the identity" (Brown 1997:3). The great expectations concerning job security, career growth, are all mediated by non-work place factors, in fulfilling the other roles the worker assumed as a breadwinner, community member etc. Also, the changing work processes and practices may elicit both "direct" and "indirect" agentic responses from the individual worker. The individual would have to tackle the challenges of both "old" and "new" ways of doing things in the organisation. It is also in this context that his "agentic construction" and identity would have to be helpful in constructing relations with "significant others"; such as the team mates, supervisors and other workers who "can also be influential in the formation of his occupational identity at work as an individual" (Brown 1997:5). The social relations between these significant others have also been identified "as salient in the process of any workplace identity formation" (Brown 1997:5). Also, the distinctive work communities in the Refinery remain a cluster around which the processes of occupational identities are formed. The skilled worker in the process plant relies on the explicit "support, encouragement and advice" (Brown 1997:5) from mentors and team-mates to attain the orientations and behavioural standards expected of him as plant process (refinery) operator. The distinct community of practices upon which "mix occupational traits" are embedded shape the manner in which the individual worker construct his work identity, and in relations to others (Brown 1996).

Browns (1996, 1997) "dynamic model", in individual's construction of occupational identity and his "agentic engagement" fits into Lave's (1991) theoretical framework of "situated learning in Community of Practice (CoP) in explaining the mediating role of socio-cultural analysis of collective competence and knowledge base dynamics in the workplace (Morgan and Boreham 2004). Lave (1991) had argued that workers "knowledgeable skill" and occupational identity are subsumed in CoP. And the ensuing "social practice" needed for "work activity" are underpinned by agentic interdependence of actors – the workers. More importantly as pointed out by Lave (1991, in Morgan and Boreham 2004:309) the process of developing such occupational learning skills and practices are also underpinned by a "process of social and cultural mediators" which gives meaning to the individual in the on-going workplace activity. As explanatory models, workplace collective competence and knowledge-base, surrounding work process of plant operations and practices in the Refinery, rest on Browns (1996, 1997), Laves (1991) and Morgan and Boreham (2004) analysis. And this is deployed in evaluating the social processes and relational dynamics of "work activity" among the plant process operators. Morgan and Borehams (2004) model is brought in as theoretical construct to explain the relational dynamics of "work activity" in the process plant. However, their models of analysis are located within mainstream sociological praxis, which do not account for other dimensions of "embedded power- relations", in the workplace.

Still within mainstream sociological analysis, collective competence as analytical concept has been viewed as incorporating means of "co-constructing, in explicit and relatively structured ways" (Fuller and Unwin 2002) among team members or a work group. This distinctive feature of collective competence has therefore made collective plant process roles a "co-activity" among the plant process workers. Therefore, from social-relational perspective of learning; "how things are done" in the process plant, and collective competence may be re-interpreted as "context embedded"; allowing skill formation for individual's workers, but also redefining relational patterns in ways that fulfil work processes. In other words, for the plant operators, the socio-relational dimensions of work process are "mutually constitutive". The mutually "constitutiveness" of collective competence and operations process allows a "collectivistic interpretations", and consequently, how they go about their work roles in the process plants. Pivotal to the relevance of socio-relational model as gleamed from Morgan and Boreham (2004) are the "repertoire of tools" i.e. language, in coded form, and "cultural artefacts" that are mobilised, and guide the social process of "work activity".

Drawn into our argument in this understanding, they include those artefacts enacted collectively for problem-solving activity in the process plants. The cultural artefacts are the "socially-constructed" nuances of the refinery process operations in their "community of practice." Performance of task and the competence dimension of it, have therefore become an "integral part of generative social practices" Morgan and Boreham (2004:309) and not a mere deployment of "labour-power" on the task to be performed. To the workers, according to Boreham, 2000; and Boreham et al 2002, knowledge or skill deployed in "work activity" has become a collective resource; a dynamic manifestation of interactions between themselves, artefacts i.e. language and codes specific to the "work activity, and the work itself" (cited in Morgan and Boreham 2004:209). Re-conceptualised from Engestrom's (1987, 2001) and Leontev's (1978) model of "higher functions" of skills and practice, collective competence in the refinery process plant is re-interpreted here as "work activity system" whose groups or participants orientations are tilted towards collective roles e.g. refinery process operations, mediated by task differentiation of team members from many operating procedures codified in "cultural artefacts" e.g. charts, blue-prints, meetings, briefings and computers. Collective roles in the performance of tasks are located and indeed guided by the "repertoire of artefacts, which also remain a significant constituent" of the group for carrying out work activity, Morgan and Boreham (2004:310). Also, the "expansive learning" Engestom (2001), dimension of the collective culture and competence enable the refinery team

member to learn and co-relate in a manner that moves beyond "occupational boundaries," that might be imposed by skills or task demarcation. Expansive learning as described by Morgan and Boreham (2004:310) "occurs when the group constructs new working practices by reflecting collectively on the whole work activity system" in solving the operations problems.

2.3 Work Process and its Collective Competence Dimensions in the Process Plant: labour process evaluation

Evaluation of the refinery's operation work process, in its collective dimension is done in this Section of the Paper, based on the conceptual remits explored above. This has involved the dimensions of collective knowledge building and horizontal communication, and providing "cultural repertoire" to mediate refinery process work activity. Work (labour) process in the refinery are carried out around three major task areas; plant operations, plant maintenance and monitoring of quality of production. Tasks are to be performed by the team of plant operators in this form, typically comprising ten to twelve members that cut across the relevant task areas. There is expected to be technical co-ordination and coherence across these skill/technical lines. For a stable operation system, the tasks of this team include controlling, regulating, optimising and starting and shutting down plant valves. The position of the Control Room Operations in the Refinery is also very important in understanding the labour process. Depending on the conditions of the process operation, control room operations provide back-up information for the plant operators that are inside the plant. Monitoring the performance of the plant operation, and reporting the "faults", has to be balanced with "information-relay" between the plant operators and the control room. For instance, an apparent faulty functioning of a particular instrument or installations may at times give wrong signals or information to control-room; this has to be counter-checked by the plant operators. As noted by one of the plant operators "in order to prevent any error, we normally re-read and counter-check the pumps by going inside to record and compare with what the console gives". This implies, on the one hand, that work process is interdependent, and on the other hand, it also emphasises that Plant Operators must be acquainted with the order and routines, and must not be reluctant about the routine checks of the pump's-gauge parameter.

The routine checks and reading of valves of the temperatures may appear as just routine, but it also significantly brought home the value of tacit knowledge and competence of the operators. As remarked by the Superintendent "when the value of a parameter is noticed to go outside the normal, the operator is expected to begin to anticipate problems", in such circumstance, there are some of the "rules of thumb" he can use, but most importantly, he brings his experience to bear, depending on the complexity and dimensions of the problems." Thus, knowledge and experience of daily operations of the process plant re-emphasises the competence-base of the task team in the plant. Coping with problems of the refinery process operations involves not just being familiar with the entire plant; "inside and outside", but also being experienced in its complex dimensions, and how they are connected in terms of process flow. This, according to the Superintendent, involves developing in the plant operators, multi-level skills in order to be able to work in all sections of the plants installation. Thus, knowledge-understanding of process operations with inside the plant experience goes hand in hand with the refinery task of the process operator. Acquisition of the plant process collective knowledge in its complex dimensions is facilitated by Plant Operating Sheet, (POS); a codified manual, meant to guide the plant operators' tasks.

As a highly automated, continuous process-flow environment, operating and controlling "work activity"- labour process, are carried out by both "manual" and "automatic". The automatic control being an advanced one, designed to "prompt up" awareness of any fault, and how to act in rectifying the problem. A typical disturbance in the process operation occurs when for instance "parameters go beyond the boundaries." This disturbance is not just a disturbance to plant operations, but also a disturbance to the often "quiet moments" the plant operators may be enjoying in their " rest-room" as a result of the self-operating, automated system of the continuous process flow. Thus, as remarked by one of the plant operators, "it is always a clarion call for all of us in moments of this disturbance." This remark underscores how important the task of the operators, in responding promptly and effectively in moments of disturbance. A good understanding of the entire process in its complexity and operations, and in teasing out the procedures for tackling the difficult situations are provided by the Plant Operating Sheet (POS). The procedures and processes to follow in "starting and stopping" the operations in moments of "critical incidents" are provided as guides in the Plant Operating Sheet (POS).

Work process within the operating environment of the plant therefore requires a degree of preparedness on the part of the operators; in one moment it could be "quiet", and indeed for a long stretch of days, the operators could be having their "fun" in the rest rooms and spaces they carved out for exchanging all kinds of "shopfloor banters and jokes"; and abruptly, disturbance and critical incidents could necessitate temporary "shut-down" requiring full interventions. A typical daily work routine for the team leaders and his members start with what is referred to as "controlling or monitoring tour" of the process plant. They take predetermined routes as contained in the "Sheet"; round the plant with the leader holding "hand-held computer". He used this to verify the reading of the valves parameters, en route, as they move round the plant. This helps to provide needed information which is later fed into the control room for cross checking and feedback.

As I observed during one of our "tours" (ethnography) of the plant, the processes of detecting any fault in the flow-process involves not just writing down the information; the team "feels", "smells" and "hear" the sound of the operation of the installation. As we moved along round the plant, they had to double check everything was working well. As the team leader remarked "though you have to record the numbers and figures, you also need to feel it this way, you double-check everything is perfectly working well". For instance, as he remarked, the temperature gauge could be in the right place, but again, there could be a leaking pipe, valves and holes that need greasing. Thus, though the work process activity may revolve

round the performance of automatic process flow system, the experience that comes through sensory perception mediate a purely technical understanding of work routine in the process operations, and this equally remain crucial in terms of collective work competence. Though, the "inspection tour" being described here could be technical and predetermined, the mediating roles of sensory perceptions of smells, sound, feeling of the entire complex installation make work process an "integrated-whole" for a complete understanding of the flow process. "in this way, I always tell my boys to see, feel, smell and hear for themselves, how a pipe is operating, and hears the sound of a valve, for them to make a sense of the entire process"; remarked by the team leader during one of our tours.

The significance of this for our evaluation and understanding, here, is looking at the "social-process or cultural" dimensions of work process in the refinery, which requires competent knowledge, and which also goes beyond the technical side of the work process. There are differences in the processes of functioning of the plant operations, and this equally requires differences in way of sensing and interpreting the functioning. Understanding the operating systems of the plant from this collective point of view requires bringing in the "specificity" of the knowledge, in terms of the "repertoire of artefacts" required to interpret the functioning. And this often entails integrative work knowledge and understanding of the entire process. These are noted in the remarks of the Superintendent, on one of our inspection tours in the plant; "when you open a value gently, you cannot determine whether the pipe is flowing through, you need to bring in other variables that challenge your sensory perceptions."

Thus, though it may be assumed that the daily work routine of the inspection is highly technical as information gathering, "the operators need to bring in their knowledge in verifying and reporting what they have observed," remarked the Superintendent. Also, as he remarked further, "our routine check is never an "open-ended" one; you need to pay attention to some other factors before making your report". "On-the-spot" observation and immediate responses of the plant's operators "on tour" also count in shaping their collective competence. For instance, a water or steam-leak may not necessitate making a report on, but looking round the entire spot and put an instant remedy by turning another valve in another direction. And this may even fix up a pipe or valve that is already making a noise, somewhere else in the entire installation. This dimension of work process and understanding is built upon by Control Rooms "inter-mediation". As "over viewer" of the entire plant process operation, the Control Room can give certain specific instructions to what the plant operators must do. For instance, the control room can advise to make manual adjustments to temperature and reading of valves and pipes temperature in attempt to counter-balance some other "incidents" within the entire process.

From the perspective of Engestroms "expansive learning" therefore, work process in the refinery's process operations could be said to revolve round having a "broad competence" profile that put into consideration not only technical competence but also a "socio-cultural symbiosis" of attitude towards Quality Production, Safety of Environment, in an integrated/interconnected manner. Plant Operators' collective sense and interpretations of the specific dimensions of the process operation, broadened into building up the "professional" and collective competence, needed for the work process. The specifics and detailed competence profiles needed to operate effectively as plant operators are also broaden into understanding the labour process dynamics in the refinery.

3. CONCLUSION

Review of literature on labour process in this paper resonates with theoretical assumptions behind workplace competence- identity formation. The contextual illustrations and analysis in the paper also show that collective-identity of competence formation generates a socio-cultural dimension of workplace knowledge and collective competence that cut across occupational boundaries in the Refinery. Thematic analysis of the review has been located in the three dimensions of Boreham's (2004) theoretical strands, in which the refinery work process opened up space for the creation of "shared-knowledge", and concomitantly provided cultural tools in the form of "codified language" to mediate refinery operation's learning and knowledge-sharing. These consequently re-compose the work process that cut across skills formation within the refinery. Review of literature has remained in the genre and tradition of mainstream sociology of work approach to understanding work process in the refinery. As demonstrated above, contextual analysis thus privileged the utility of mainstream sociological praxis deployed for the analysis of work process, and issues surrounding it, within the remit of collective competence and labour process analysis in the refinery.

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