

## **MEANINGFUL WORK AS A MEDIATOR BETWEEN INTRINSIC MOTIVATION AND INNOVATIVE BEHAVIOUR**

**FAIZA ABUBAKAR BAWURO<sup>1</sup>, DEVA V. BELLO (Ph.D.)<sup>2</sup> & BADIYA Y. MAGAJI<sup>2</sup>**

<sup>1,2</sup>Department of Management Technology, School of Management and Information Technology, Modibbo Adama University of Technology (MAUTECH), Yola, Adamawa State, Nigeria.

• *Corresponding Author email: faizabawuro@gmail.com*

### **ABSTRACT**

This paper is a literature review on the effect of meaningful work as a mediator between intrinsic motivation and innovative behaviour. Innovation researchers often use creativity research as a building block to develop theoretical foundation for drivers of innovative behaviour. Past studies have found that intrinsic motivation drives individual creativity, but several studies have produced mixed results. Thus, this paper attempts to take a closer look at meaningful work as a mediator between intrinsic motivation and innovative behaviour. Moreover, the importance of innovative behaviour among teachers have also been highlighted. Recommendation for further research is discussed at the end.

**Keywords:** *Intrinsic Motivation, Creativity, Innovative Behaviour, Meaningful Work, and Teachers*

### **1. Introduction**

There is a consensus among researchers that innovative behaviour is an important human attribute. Innovative behaviour therefore, is described as the outward expression of the inner creativity of a person through which individuals generate and implement new ideas to solve work-related problems or improve performance (Devloo *et al.*, 2015). Although, conceptually creativity and innovation are different, but ideas are the foundation of change or improvement, and creativity usually provides the starting point for eventual innovation (Gkorezis, 2016). For this reason, innovation researchers often use insights from creativity research as a building block to develop theoretical foundation for the drivers of innovative behaviour. De Jong & Den Hartog (2010) explained that creativity is an essential component of innovative behaviour that is evident at the beginning of innovation process. While Dhar (2015) described creativity as a powerful weapon for fostering innovation at the workplace.

Therefore, creativity and innovation have been introduced as the foundation for attaining competitive advantage, sustainability and growth (Scott & Bruce, 1994). Consequently, innovative behaviour among teachers is foreseeable. Teachers are the key personnel in the education system, who are accountable for designing and delivering learning that should engage students from different backgrounds and school operation (Baumann *et al.*, 2016). Accordingly, they are expected to be constantly alert of new ideas and formulate new approaches regarding their teaching practices in order to impact on their students' outcomes. In fact, Educators, curriculum reformers and researchers have emphasised the significance of innovation in education. Specifically, Majeed & Ghazali (2018) in their study found that seminal paper on creativity attracted the attention of several researchers to opine on the significance of innovation in education. This is because we are now living in the world where it is ever-changing, which makes the future unpredictable due to expansion in the knowledge fields, advancement in technology and globalization. Although the changes create new opportunities, but also leads to new challenging areas (Tarman, 2016). Therefore, for teachers to improve their efficiency, maintain relevance and improve learning outcomes, they need to be innovative in all areas. Moreover, findings show that innovative and effective teaching serve long term intellectual needs of students. The development of creative thinking, knowledgeability, self-sufficiency and rationale thinking among the students is not only beneficial at individual level, but also to the society at large (Sachou, 2014; Schleicher, 2015). Therefore, the demand for innovation in teaching especially in a knowledge-based and globalised society is critical (Vokatis & Zhang, 2016). Education will no longer achieve its desired goals when teachers fail to innovate in their teaching practices (Land & Bayne, 2011).

However, there is belief among innovation researchers that the extent to which teachers bring in those new ideas to teaching practices is not only determined by their expertise and knowledge, but also by their sense of purpose and belief for greater good (Amabile & Pratt, 2016). Due to the mounting interest on how to enhance innovation in the workplace, researchers have focused much attention on relevant psychological forces (Klaeijnsen, Vermeulen & Martens, 2017). In this regard, intrinsic motivation emerged as a core antecedent that could stimulate employees due to curiosity, interest or a desire to learn (Devloo *et al.*, 2015; Ryan & Deci, 2000). However, the relationship between intrinsic motivation and creativity has yielded equivocal results (Grant & Berry, 2011). Although psychologists and organisational scholars demonstrate that intrinsic motivation triggers individual creativity (Zhang & Gheibi, 2015), evidence has accumulated showing that intrinsic motivation is not significantly associated with creativity (Perry-Smith, 2006). As a result, researchers provided suggestions to this theorized linkage by proposing potential mediators such

as interpersonal relations (Mueller & Kamdar, 2011); creative process (Zhang & Bartol, 2010) and moderators like self-efficacy (Ahlin, Drnovšek & Hisrich, 2014) and prosocial motivation (Grant & Berry, 2011). Therefore, given the above contributions by different scholars, the paper seeks to contribute to existing literature by proposing meaningful work as a mediator between intrinsic motivation and innovative behaviour.

## **2. Statement of problem**

Individual innovative behaviour is considered an important asset that enables any workplace to constantly improve, change or adapt to the ever-changing environment in order to attain competitive advantage and sustainability (Devloo *et al.*, 2015; Klaijnsen *et al.*, 2017; Thurlings, Evers & Vermeulen, 2015). Researchers have found that innovative behaviour has become a required skill in the 21<sup>st</sup> century (Majeed & Ghazali, 2018; Schleicher, 2015; Soulé & Warrick, 2015). Since innovation is a combination of means to reach goals, industry innovation can as well be transferred to education. An innovator will always think of a better way of doing things; thus, a teacher can as well integrate innovativeness in formulating new approaches to teaching in order to improve, motivate and engage students in the classroom (Baumann *et al.*, 2016). However, the lack of innovation in teaching among teachers may inhibit the engagement of students in the classroom, prevent the development of rationale and creative thinking among students. The cost of loss of innovation is vital for education as it prepares students in response to the demands of today's workforce (Collard & Looney, 2014). Thus, by disregarding the significance of innovation in teaching practices, critical thinking, comprehension and liberty of thought among students is hindered.

Findings shows that research on innovative behaviour is about what motivates people to initiate new ideas (Scott & Bruce, 1994). Virtually, in all theories of creativity and innovation, motivational components emerged as the key factors for maximizing innovative potentials of individuals (Amabile & Pillemer, 2012; Hammond *et al.*, 2011). Literature found that intrinsic motivation emerged as the core antecedent of creative and innovative behaviour (Amabile & Pillemer, 2012; Woodman, Sawyer & Griffin, 1993; Wu *et al.*, 2014). However, numerous studies have shown that intrinsic motivation is either positively or moderately related (Li *et al.*, 2015). While some researchers found that intrinsic motivation is vaguely associated with creativity (Grant & Berry, 2011). Another study emphasized that intrinsic motivation alone cannot stimulate creativity at the workplace (Auger & Woodman, 2016). In addition, Grant (2007) argued that motivation is not just intrinsic but has other manifestations. Perhaps intrinsic motivation is important for creativity, but it needs to exist along with other intervening variables to have a significant impact on creativity. Therefore, due to inconsistent findings on the relationship between intrinsic motivation and

creativity, there seems to be a gap in the literature. This study seeks to fill the gap by taking a closer look at meaningful work as a mediator between the relationship between intrinsic motivation and innovative behaviour.

### **3. Purpose**

The main purpose of this study is to determine what theory building literature and recent studies can inform us in order to propose the construct of meaningful work as a mediator between intrinsic motivation and innovative behaviour. Though there have been theories on human motivation that underlie innovative behaviour with a focus on variables such as self-efficacy, leadership, prosocial motivation, etc., still there is scarcity if any research conducted on meaningful work as an aspect of work motivation in triggering innovativeness at work. Thus, a review on this area is important to identify the gap that exist, which warrants further research.

### **4. Procedures**

A literature review was conducted to find relevant researched-based articles, including business, education, sociology and psychology literatures. The following search engines were used: Eric, Academic Search Elite, Ejournals, Science Direct, Emerald Journals and Dissertation Abstracts. The search engines were divided among the researchers, and keywords used in the literature included innovative work behaviour, innovative behaviour, innovativeness, idea implementation, creative teaching, opportunity exploration, innovation and motivation using American and British spellings. Moreover, to limit the search to teachers, each term was combined with teacher or education. The review search covered only published between 1990 and 2019. The resulting literature were reviewed and analysed.

### **5. Theoretical framework**

Although there is a long history of research about what motivates employees and its association with creativity and innovative behaviour, this paper focuses on those theories that are concerned with the forces within a person that causes he/she to behave in specific goal-directed behaviour. Chalofsky (2003) identified three theoretical approaches to motivation: (1) the need theories of 1960s and 1970s emphasise that human beings act to satisfy their intrinsic needs; (2) the reinforcement theories identified forces within the work environment that directs people's behaviour towards achieving certain goals; and (3) person-environment interaction theories believe that the processes that exist between the person and environment cause them to consider the anticipated consequences of their actions. These three approaches supported the notion that people are motivated to take certain directions or actions to fulfil or satisfy their inherent needs (Cook & Artino, 2016). Moreover, both humanistic psychologists and classic motivation theories believe that

individuals have an inherent desire or need for a work life that is meaningful (Herzberg, 2005; Maslow, 1943; McGregor, 1960).

However, despite the significance of finding meaning and purpose for individuals in the workplace, the role of meaningful work in creativity literature was largely absent. Maslow (1971) emphasises that individuals who do not perceive their work as meaningful and significant will not work up to their full professional capacity. While Staw (1990) hints that individual creativity is enhanced when the problem-solver recognises the problem as important. As supported by Amabile & Pratt (2016), the authors argue that perceived meaningfulness at work influences creative processes through intrinsic motivation. Following the view of other scholars (Rosso, Dekas & Wrzesniewski, 2010), meaningful work is intrinsically motivating. Therefore, the construct of meaningful work is crucial for explaining intrinsic motivation to engage in creative work, and thus innovative work.

## **6. Literature Review**

### *6.1 Intrinsic Motivation and Innovative behaviour*

It is a fact that individuals are driven by motivational force in order to bring in those new and useful ideas (Gorozidis & Papaioannou, 2014). The most commonly identified types of motivation are namely: intrinsic and extrinsic motivation (Ryan & Deci, 2000). Extrinsic motivation is geared toward external rewards, which is said to be less effective because it comes from outside the person. While intrinsic motivation is the internal rewards that comes from within (Benedetti *et al.*, 2015). Prior studies emphasised that linkages between contextual factors of work and creativity should be via intrinsic motivation, as researchers have authenticated the importance of intrinsic motivation for creativity (Amabile *et al.*, 2004). According to the Amabile's componential theory of creativity, creativity is highest when a person is intrinsically motivated (Amabile & Pillemer, 2012). While self-determination theory (SDT) claim that intrinsic motivation should be regarded as the superior type of motivation (Taylor *et al.*, 2014). In line with these claims, several innovation researchers have focused on the role of intrinsic motivation for innovative behaviour at the workplace (Devloo *et al.*, 2015). Literature has shown that intrinsic motivation relates to positive work outcomes such as employees' ability to carry out innovation (Amabile & Pratt, 2016); increases job satisfaction (Masvaure, Ruggunan & Maharaj, 2014); job performance (Guo *et al.*, 2014); and less absent (Andersen, Kristensen & Pedersen, 2015). Therefore, intrinsic motivation can be a predictor of teacher innovative behaviour. This is because past studies have shown that motivated individuals invest in more effort, as they possess robust interest and the willingness to learn (Lazaroiu, 2015). Moreover, Klaijisen *et al.* (2017) state that intrinsic motivation was found to produce perseverance at work, ability to take risk, positive liking and psychological elasticity. Emotion theorists' belief that intrinsic motivation

produces constructive impact, which influences individual creativity by broadening his/her scope of consideration accessible for advancing intellectually (Silvia, 2008). Prior studies have also revealed that intrinsic motivation is important for teachers (Csikszentmihalyi, 2014; Fidan & Oztürk, 2015; Truta, 2014). Given the above findings, this implies that intrinsic motivation has a significant relationship with teachers' innovative behaviour.

On the contrary, some group of researchers (Grant & Berry, 2011; Perry-Smith, 2006; Zhou & Shalley, 2003) established that the analysis on the relationship between intrinsic motivation and individual creativity has yielded unclear, mixed and confusing results, which raises the question on whether intrinsic motivation stimulates creativity. Grant & Berry (2011) asserted that most of the studies on intrinsic motivation and creativity involved laboratory experiments with children and field studies with working adults, in which it is possible for a researcher to manipulate intrinsic motivation of the participants to obtain independent expert ratings of the creative outcomes. Given that our understanding of the intrinsic motivation and innovation relationship is mostly based on theoretical assumptions that were established in the previous century, it is not very surprising that scholars increasingly call for more research in this domain. Moreover, innovation is a risky endeavour, it can be assumed that engaging in innovative activities can bring benefits but also costs for employees which might lead to fluctuations in the experience of motivation during an innovation process (Bammens, 2016).

Therefore, being a social phenomenon, organisational creation should be properly inspected in context. Researchers specified that a clearer understanding of the relations between intrinsic motivation and creativity recommends more relevant and actual administration practices, instead of merely connecting the administration of intrinsic motivation with creativity (Majeed & Ghazali, 2018). Specifically, Zhou & Shalley (2003) argue that perhaps it could be that high intrinsic motivation is important for creativity, but it needs to exist along with other intervening variables to have a significant effect on creativity. This notion was supported by George (2007), the author maintained that rather than emphasizing intrinsic motivation underlies creativity, researchers need to tackle this theorized linkage more directly and in more depth. This implies that we are still far from a good understanding of the actual motivational reasons individuals engage in innovative behaviour. Therefore, this paper will attempt to fill the gap identified in the literature by keeping in view of the inconsistent findings.

### *6.2 Meaningful work, Intrinsic Motivation, and Innovative Behaviour*

Given that the construct of meaningful work is still emerging, researchers have not empirically examined the effect of meaningful work together with intrinsic

motivation on teachers' innovative behaviour. Yet, empirical evidence from different settings or cultures have indicated that meaningful work and intrinsic motivation are imperative for innovative behaviour. For example, Amabile & Pratt (2016) in their revised dynamic model of creativity and innovation demonstrated that perceived meaningfulness have a unique contribution to intrinsic motivation, and thus, creativity and innovative behaviour. Also, in the evolutionary approach to creativity and innovation, Staw (1990) hints that creativity is improved when the problem-solver sees that the problem is important. While Hackman & Oldham (1975) and Rosso *et al.* (2010) assert that meaningful work is indeed intrinsically motivating. This implies that meaningful work plays a key role in intrinsic motivation. Amabile & Pratt (2016) explained that engaging in intrinsically motivated work behaviour creates congruence between work behaviours and one's self-concept, which in turn results in the feelings of meaningfulness. In addition, Steger, Dik & Duffy (2012) found significant correlations between intrinsic motivation and meaningful work. while, Chalofsky & Krishna (2009) found that the feeling of meaningfulness at work increases employees' intrinsic motivation, which in turn help the employees to engage more at work. Since meaningful work means the feeling that one is pursuing a worthy work purpose, worth one's time and energy (Steger & Dik, 2010), and intrinsic motivation is the positive experiences concerned for the work itself, which results in commitment, enthusiasm and self-management (Cherry, 2016), then the combination of the two variables will be a powerful motivational drive for teachers to innovate. This implies that perceived meaningfulness at work can foster intrinsic motivation, which in turn can enhance innovative behaviour.

But, according to Pratt, Pradies & Lepisto (2013), referring meaningful work as positive does not mean employees find their jobs enjoyable or pleasurable. while Amabile & Pratt (2016) also explained that meaningful work, similar to usefulness or novelty is in the eye of the beholder. This means that what one-person view as meaningful work may not be perceived as meaningful work by another person. Therefore, given the above findings, the relationship between meaningful work and individual innovative behaviour has not received the considerable attention it deserves. Thus, there is still the need to empirically study meaningful work as a mediator between intrinsic motivation and creativity. This implies a gap in the literature because there are relatively few studies on the role of meaningful work in innovative behaviour.

## **7. Conclusions**

Reviewing previous research found that the field of innovation is still developing as the knowledge concerning contextual factors that influence innovative behaviour is fragmented. Therefore, this is a fertile area that deserves the attention of researchers. We recommend that further research is needed to support and elaborate the role of

meaningful work in innovative behaviour. Specifically, this article suggests empirical examination of the mediating effect of meaningful work between intrinsic motivation and innovative behaviour of teachers in developing countries.

## **References**

- Ahlin, B., Drnovšek, M. & Hisrich, R. D. (2014). Entrepreneurs' creativity and firm innovation: the moderating role of entrepreneurial self-efficacy. *Small business economics*, 43(1), 101-117.
- Amabile, T. M. & Pillemer, J. (2012). Perspectives on the social psychology of creativity. *The Journal of Creative Behavior*, 46(1), 3-15.
- Amabile, T. M. & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, 36, 157-183.
- Amabile, T. M., Schatzel, E. A., Moneta, G. B. & Kramer, S. J. (2004). Leader behaviors and the work environment for creativity: Perceived leader support. *The Leadership Quarterly*, 15(1), 5-32.
- Andersen, L. B., Kristensen, N. & Pedersen, L. H. (2015). Documentation requirements, intrinsic motivation, and worker absence. *International public management journal*, 18(4), 483-513.
- Auger, P. & Woodman, R. W. (2016). Creativity and intrinsic motivation: Exploring a complex relationship. *The Journal of Applied Behavioral Science*, 52(3), 342-366.
- Bammens, Y. P. (2016). Employees' innovative behavior in social context: A closer examination of the role of organizational care. *Journal of Product Innovation Management*, 33(3), 244-259.
- Baumann, T., Mantay, K., Swanger, A., Saganski, G. & Stepke, S. (2016). Education and innovation management: a contradiction? How to manage educational projects if innovation is crucial for success and innovation management is mostly unknown. *Procedia-Social and Behavioral Sciences*, 226, 243-251.
- Benedetti, A. A., Diefendorff, J. M., Gabriel, A. S. & Chandler, M. M. (2015). The effects of intrinsic and extrinsic sources of motivation on well-being depend on time of day: The moderating effects of workday accumulation. *Journal of Vocational Behavior*, 88, 38-46.
- Chalofsky, N. (2003). An emerging construct for meaningful work. *Human Resource Development International*, 6(1), 69-83.
- Chalofsky, N. & Krishna, V. (2009). Meaningfulness, commitment, and engagement: The intersection of a deeper level of intrinsic motivation. *Advances in Developing Human Resources*, 11(2), 189-203.
- Cherry, K. (2016). What is intrinsic motivation. *About.com Psychology* retrieved from.



- Collard, P. & Looney, J. (2014). Nurturing creativity in education. *European Journal of Education, 49*(3), 348-364.
- Cook, D. A. & Artino, A. R. (2016). Motivation to learn: an overview of contemporary theories. *Medical education, 50*(10), 997-1014.
- Csikszentmihalyi, M. (2014). Intrinsic motivation and effective teaching *Applications of flow in human development and education* (pp. 173-187): Springer.
- De Jong, J. & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and innovation management, 19*(1), 23-36.
- Devloo, T., Anseel, F., De Beuckelaer, A. & Salanova, M. (2015). Keep the fire burning: Reciprocal gains of basic need satisfaction, intrinsic motivation and innovative work behaviour. *European Journal of Work and Organizational Psychology, 24*(4), 491-504.
- Dhar, R. L. (2015). The effects of high performance human resource practices on service innovative behaviour. *International Journal of Hospitality Management, 51*, 67-75.
- Fidan, T. & Oztürk, I. (2015). The relationship of the creativity of public and private school teachers to their intrinsic motivation and the school climate for innovation. *Procedia-Social and Behavioral Sciences, 195*, 905-914.
- George, J. M. (2007). 9 Creativity in Organizations. *The academy of management annals, 1*(1), 439-477.
- Gkorezis, P. (2016). Principal empowering leadership and teacher innovative behavior: A moderated mediation model. *International journal of educational management, 30*(6), 1030-1044.
- Gorozidis, G. & Papaioannou, A. G. (2014). Teachers' motivation to participate in training and to implement innovations. *Teaching and Teacher Education, 39*, 1-11.
- Grant, A. M. (2007). Relational job design and the motivation to make a prosocial difference. *Academy of management review, 32*(2), 393-417.
- Grant, A. M. & Berry, J. W. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *Academy of management journal, 54*(1), 73-96.
- Guo, Y., Liao, J., Liao, S. & Zhang, Y. (2014). The mediating role of intrinsic motivation on the relationship between developmental feedback and employee job performance. *Social Behavior and Personality: an international journal, 42*(5), 731-741.
- Hackman, J. R. & Oldham, G. R. (1975). Development of the job diagnostic survey. *Journal of applied psychology, 60*(2), 159.

- Hammond, M. M., Neff, N. L., Farr, J. L., Schwall, A. R. & Zhao, X. (2011). Predictors of individual-level innovation at work: A meta-analysis. *Psychology of Aesthetics, Creativity, and the Arts*, 5(1), 90.
- Herzberg, F. (2005). Motivation-hygiene theory. *Organizational behavior one: Essential theories of motivation and leadership*, eds JB Miner, ME Sharpe Inc, New York, 61-74.
- Klaeijnsen, A., Vermeulen, M. & Martens, R. (2017). Teachers' innovative behaviour: the importance of basic psychological need satisfaction, intrinsic motivation, and occupational self-efficacy. *Scandinavian Journal of Educational Research*, 1-14.
- Land, R. & Bayne, S. (2011). *Digital difference: Perspectives on online learning* (Vol. 50): Springer Science & Business Media.
- Lazaroiu, G. (2015). Employee motivation and job performance. *Linguistic and Philosophical Investigations*, 14, 97.
- Li, Y., Wei, F., Ren, S. & Di, Y. (2015). Locus of control, psychological empowerment and intrinsic motivation relation to performance. *Journal of Managerial Psychology*, 30(4), 422-438.
- Majeed, A. & Ghazali, S. B. (2018). The Mediating Role of Intrinsic Motivation Between Transformational Leadership and Creativity. *Acta Information Malaysia*, 1(1), 01-03.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, 50(4), 370.
- Maslow, A. H. (1971). The farther reaches of human nature.
- Masvaure, P., Ruggunan, S. & Maharaj, A. (2014). Work engagement, intrinsic motivation and job satisfaction among employees of a diamond mining company in Zimbabwe. *Journal of Economics and Behavioral Studies*, 6(6), 488.
- McGregor, D. (1960). Theory X and theory Y. *Organization theory*, 358, 374.
- Mueller, J. S. & Kamdar, D. (2011). Why seeking help from teammates is a blessing and a curse: a theory of help seeking and individual creativity in team contexts. *Journal of Applied Psychology*, 96(2), 263.
- Perry-Smith, J. E. (2006). Social yet creative: The role of social relationships in facilitating individual creativity. *Academy of management Journal*, 49(1), 85-101.
- Pratt, M., Pradies, C. & Lepisto, D. (2013). Doing well, doing good, and doing with: Organizational practices for effectively cultivating meaningful work. *Purpose and meaning in the workplace*, 173-196.
- Rosso, B. D., Dekas, K. H. & Wrzesniewski, A. (2010). On the meaning of work: A theoretical integration and review. *Research in Organizational Behavior*, 30, 91-127.

- Ryan, R. M. & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67.
- Sachou, M.-E. (2014). *Innovative methods of teaching*. Paper presented at the International Conference: The future of Education. Kantas School–Vrilissia (Greece). mar-sach@ hotmail. com.
- Schleicher, A. (2015). *Schools for 21st-Century Learners: Strong Leaders, Confident Teachers, Innovative Approaches*. *International Summit on the Teaching Profession*: ERIC.
- Scott, S. G. & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of management journal*, 37(3), 580-607.
- Silvia, P. J. (2008). Interest—The curious emotion. *Current Directions in Psychological Science*, 17(1), 57-60.
- Soulé, H. & Warrick, T. (2015). Defining 21st century readiness for all students: What we know and how to get there. *Psychology of Aesthetics, Creativity, and the Arts*, 9(2), 178.
- Staw, B. M. (1990). An evolutionary approach to creativity and innovation.
- Steger, M. F. & Dik, B. J. (2010). Work as meaning: Individual and organizational benefits of engaging in meaningful work *Oxford handbook of positive psychology and work*.
- Steger, M. F., Dik, B. J. & Duffy, R. D. (2012). Measuring meaningful work: The work and meaning inventory (WAMI). *Journal of Career Assessment*, 20(3), 322-337.
- Tarman, B. (2016). Innovation and education. *Browser Download This Paper*.
- Taylor, G., Jungert, T., Mageau, G. A., Schattke, K., Dedic, H., Rosenfield, S. & Koestner, R. (2014). A self-determination theory approach to predicting school achievement over time: The unique role of intrinsic motivation. *Contemporary educational psychology*, 39(4), 342-358.
- Thurlings, M., Evers, A. T. & Vermeulen, M. (2015). Toward a model of explaining teachers' innovative behavior: A literature review. *Review of Educational Research*, 85(3), 430-471.
- Truta, C. (2014). Emotional labor and motivation in teachers. *Procedia-Social and Behavioral Sciences*, 127, 791-795.
- Vokatis, B. & Zhang, J. (2016). The Professional Identity of Three Innovative Teachers Engaging in Sustained Knowledge Building Using Technology. *Frontline Learning Research*, 4(1), 58-77.
- Woodman, R. W., Sawyer, J. E. & Griffin, R. W. (1993). Toward a theory of organizational creativity. *Academy of management review*, 18(2), 293-321.

- Wu, J., Gong, Y., Song, J. & Zhang, Z. (2014). *When and how does intrinsic motivation enhance creativity? The mediating role of creativity goals and the moderating role of extrinsic motivation*. Paper presented at the The 2014 International Association for Chinese Management Research Conference.
- Zhang, P. & Gheibi, S. (2015). From intrinsic motivation to employee creativity: The role of knowledge integration and team psychological safety. *European Scientific Journal, ESJ, 11*(11).
- Zhang, X. & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of management journal, 53*(1), 107-128.
- Zhou, J. & Shalley, C. E. (2003). Research on employee creativity: A critical review and directions for future research *Research in personnel and human resources management* (pp. 165-217): Emerald Group Publishing Limited.