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**Development and application of a new measure of employee
engagement: The ISA Engagement Scale**

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Mission and scope

The conceptual development of employee engagement has been gaining momentum in many parts of the applied psychology literature and has recently found its way into debates within HRD. This article contributes to this burgeoning field by developing a model of engagement that is operationalized in a new 9-item measure: the Intellectual, Social, Affective Engagement Scale (ISA Engagement Scale). It fits with the objectives and scope of *Human Resource Development International* by presenting original material, contributing a new measure that operates at factor and facet levels, and making the ISA Engagement Scale available for use within business and academic communities. There are potential implications for HRD practices that enhance the experience of work and contribute to improved organisational outcomes.

Abstract

We present a new measure for assessing employee engagement. We build on Kahn's (1990) theory and develop a model of engagement that has three requirements: a work-role focus, activation and positive affect. This model was operationalized in a new measure: the Intellectual, Social, Affective Engagement Scale (ISA Engagement Scale) comprising three facets: intellectual, social and affective engagement. Data from two studies showed that the scale and its sub-scales have internal reliability. There were associations with task performance, OCB and turnover intentions. Implications are provided for academic enquiry into the engagement process, and for HRD practices that enhance the experience of work.

Keywords: intellectual engagement; social engagement; affective engagement; ISA Engagement Scale.

Introduction

Scholars in the field of Human Resource Development (HRD) are becoming increasingly interested in theoretical models which can explain how employees contribute to Organisation Development (OD) (Swanson, 2001; Shuck et al., 2011). The shift from HRD as primarily a tool of management to one that can also be used and developed by employees has been noted as a key priority for HRD practitioners (Poell, 2012). Employee engagement represents a growing body of scholarship and practitioner activity that could contribute an employee perspective to HRD. Recent developments within the engagement literature have contributed significantly to understanding the role of engagement in influencing a range of positive outcomes, such as individual performance, (Alfes et al., 2010, Bakker & Xanopoulou, 2009) and enhanced productivity (Bakker & Schaufeli, 2008; Harter, Schmidt & Hayes, 2002). These findings have recently been picked up by HRD scholars who have offered employee engagement as a psychological foundation on which to develop HRD theory and practice (Shuck & Wollard, 2010; Shuck et al., 2011; Shuck & Reio, 2011). However, approaches to the conceptualisation and measurement of engagement vary. While there are several models of engagement, recent debates have acknowledged scope for further development of engagement theory (Bakker, Albrecht & Leiter, 2011). Therefore, if employee engagement is to make a strong contribution to the field of HRD it needs further conceptual development.

The current study aims to address this issue by drawing together several areas of literature to provide a multi-dimensional conceptualisation of engagement. The main focus of the paper is the development and testing of a new employee engagement measure. Engagement is conceived in the extant literature to be a foundational variable that influences work related attitudes and behaviours (Christian

et al., 2011). Currently there are several measures that relate to different conceptual models. Many of these measures assess constituent facets of engagement, yet none of the published measures of engagement has been validated at both the facet and factor level. Here, we develop a measure that can be used to assess overall factor-level engagement as well as the constituent facet-level components. It is possible that the facets of engagement might be subtly different in function. This more nuanced measure of engagement will allow HRD practitioners to more effectively assess employee attitudes and shape OD interventions around both individual and organisational outcomes.

Engagement theory

Kahn's (1990) paper is the foundation for much of the research in this field. His framework for engagement encompassed the marshalling and deployment of intra-individual resources to the performance of work roles. Kahn's modelling was based upon needs and motives (Alderfer, 1972; Maslow, 1954), interactions with the working environment (Hackman & Oldham, 1980) and the social organisational context (Alderfer, 1985). Kahn's grounded theory approach led to his proposal that engagement is a multi-dimensional construct with three dimensions (physical, cognitive and emotional) that are experienced simultaneously.

Since Kahn's (1990) work, there have been several developments in engagement theory, which Bakker and Schaufeli (2008) categorised as follows: engagement as a set of resources that are motivational, e.g. as applied in the Gallup-12 measure (Harter, Schmidt & Hayes, 2002); behavioural engagement such as organisational citizenship (e.g. Halbesleben, Harvey & Bolino, 2009); and engagement as an affective-cognitive state (e.g. Maslach, Schaufeli & Leiter, 2001). These three categories lead to two further points of debate. First is the question of

whether engagement is a state or a set of behaviours. Recent discussion supports the state approach to engagement (Bakker et al, 2011; Parker & Griffin, 2011), and we concur with this view since it provides an important conceptual separation between state engagement and behaviours that might follow from this state. Second, the three categories are not necessarily distinct. Motivation might be linked with engagement, and both of these factors could influence affect and cognitions to enhance the engaged state, a possibility that we explore further.

Meyer and Gagné (2008) proposed that a unifying theory of engagement should be founded in motivation theory and, more specifically, self-determination theory (SDT) (Deci & Ryan, 1985). SDT comprises three component needs: competence, autonomy and relatedness. Autonomous regulation, a concept similar to engagement, results from these three needs being met (Meyer & Gagné, 2008). The SDT approach takes into account both the importance attached to motivation by Kahn (1990) and the requirement for a more holistic approach to engagement. A motivation-based approach can inform engagement theory by emphasising the importance of a focus for engagement. In Kahn's terms, it is the work role that provides opportunities to meet needs and a channel for engagement via alignment of self and role and expression of self-in-role. Thus we propose that the first condition for engagement is a defined, individual-level work role that provides a focus for engagement. Moreover, role development is noted as one of the most important concerns for HRD practitioners when developing training and learning programmes (Ruona, 1999).

We propose that a focused role can be complemented by two additional conditions: activation and positive affect. Kahn's (1990) conceptualisation of engagement encompasses the notion of activation. Engagement is an active state

associated with high levels of cognitive activity and effort. The early research on activation is grounded in physiology: activation is the degree of activity in the Reticular Ascending System (Fiske & Maddi, 1961; Scott, 1966) that is influenced by internal factors (e.g. cognitive activity) and external factors (e.g. the environment). There are two points relevant for engagement theory. Activation is a response to stimuli, including work roles (Gardner & Cummings, 1988). Furthermore, activation triggers a range of affective and cognitive responses (Fiske & Maddi, 1961) that could contribute to engagement (Bindl & Parker, 2010).

The third requirement for engagement is positive affect. Affect theory differentiates between affective states using two dimensions (Warr, 1990): valence (the extent to which an emotion is positive or negative) and activation (the extent to which an emotion is active or passive). Thus affect and activation are associated at a fundamental level, and engagement encompasses the positive, activated range of the affect spectrum (Macey & Schneider, 2008). Affect also plays an important role in motivation theory. Typically, the attainment of goals via motivated behaviour is associated with positive affect (Judge & Illies, 2002). By extension, the same argument can be applied to the role of activated affect in engagement (Gorgievski, Bakker & Schaufeli, 2010). Moreover, positive activated affect has an important role in generating cognitive-affective processes that comprise the engaged state (May et al., 2004). Thus, we suggest that positive affect is integral to engagement.

Facets of engagement

Kahn (1990) and subsequent researchers have presented work engagement as a multi-faceted construct whereby facets are activated simultaneously to create an engaged state. Empirical evidence supports this conceptualisation (May, Harter & Gilson, 2004; Rich et al., 2010), yet there has been little discussion about the

theoretical foundations for the multi-dimensional nature of work engagement. Law, Wong and Mobley (1998) proposed three criteria for any multi-dimensional construct. There must be a unified high-level theoretical framework, theoretically meaningful associations between the constituent facets and the higher order construct, and parsimony. We propose that work engagement is a latent construct whereby the higher order factor of engagement underlies the dimensions.

Following the above discussion of the three conditions for the engaged state (focus, activation and positive affect), and building upon prior research, we propose that engagement has three facets that meet the three conditions and have theoretical grounds for inclusion as a facet of state engagement.

The cognitive dimension of engagement has been an essential component in prior studies (Kahn, 1990; Macey & Schneider, 2008; May et al., 2004; Rich et al., 2010; Schaufeli et al., 2002), and concerns the association between the engaged state and high levels of cognitive activity directed towards performing the work role. Terms used include cognitive engagement (Kahn, 1990) and dedication (Schaufeli et al., 2002). Given the importance of cognitive activity, and the nature of the cognitive, intellectual activity that is necessary for the work role, we use the term *intellectual engagement* and define it as 'the extent to which one is intellectually absorbed in work and thinks about ways to improve work'.

The role of affect in engagement is theoretically and empirically clear, and many conceptualizations include this facet (Bakker & Schaufeli, 2008; Kahn 1990; May et al., 2004; Rich et al 2010; Schaufeli & Bakker, 2004; Schaufeli et al., 2002; Truss et al., 2006). The underlying theory explains this association in terms of affect rather than emotion, thus we refer to *affective engagement*, and define it as 'the extent to which one experiences a state of positive affect relating to one's work role'.

Furthermore, we propose that engagement has a third dimension: *social engagement*. There is increasing acknowledgement of the requirement of employees to work collectively (Jackson et al, 2006). Meyer and Gagné (2008) acknowledged the importance of relatedness to their SDT-based approach to engagement. Kahn (1990) presented engagement as having a clear social component. He suggested that social engagement is the experience of connectedness with others, and is an integral feature of the expression of self-in-role. The relevance of the social context to engagement has been acknowledged by other scholars in the field and this can also be linked to systems perspectives on HRD (Macey & Schneider, 2008; Swanson, 2001; Rich et al, 2010; Salanova et al., 2005), yet social engagement has not been conceptualized or operationalized as a facet of state engagement. Hence, we include a third facet, *social engagement*, defined as 'the extent to which one is socially connected with the working environment and shares common values with colleagues'.

Each of the facets requires the three conditions of focus, activation and positive affect. Intellectual engagement involves activation and focus to release cognitive effort towards attainment of a goal or solution to a challenge. Positive affect has a role since it enhances thought processes (Frederickson, 1998). Whilst affect need not be activated, affective engagement does incorporate activation and positive affect (Macey & Schneider, 2008; May et al, 2004). Social engagement also needs activation. Initiating and sustaining social interactions concerning work demands active engagement with other people (Saks, 2006), particularly when tasks are complex (Krauss et al., 2005) and focused on goal attainment (Koo & Fishbach, 2008). Social engagement can be seen as one of the highest priorities for HRD practitioners, and could be particularly relevant to OD since effective social processes are essential to positive outcomes of change (Shuck & Wollard, 2010).

Method

We generated item sets for each of the three facets of engagement, with the aim of retaining the strongest item set for each facet that would provide a conceptually clear and parsimonious assessment of engagement. We initially developed eight items for each of intellectual and social engagement, and five items for affective engagement, based on our theoretical development and prior conceptualisations of similar facets. The items were used in a pilot study comprising 200 employees from a range of organisations, which we conducted prior to the two studies presented here to check that items could be understood. Results from a principal components analysis using Varimax rotation provided preliminary support for our proposed three-facet model of engagement. Thus we proceeded to Study 1.

Participants and procedure

The participants in Study 1 were 540 employees working for a UK based manufacturing company. The company produces blow-moulded plastic bottles for the UK food and drink industry. 278 questionnaires were completed, a response rate of 51%. The final sample comprised 90.6 % men; the average age was 39.88 years (s.d. = 10.56), and the average tenure was 7.01 years (s.d. = 5.49). The respondents represented a range of occupational backgrounds including managers and senior managers (19.6%), administrative and support functions (6.1%), skilled trades (14.3%) and process and machine operators (57.5%).

Data were gathered using a hardcopy survey. Employees were informed about the purpose of the study and its confidentiality, and encouraged to participate in the survey within two weeks. The questionnaire included the new engagement items as well as a range of demographic and job-related items. All items were assessed using a 7-point Likert scale ranging from 1 (“strongly disagree”) to 7 (“strongly agree”).

Measure

Each item was presented in the form of a statement with a seven-point Likert scale response range (strongly disagree to strongly agree). The final item set is presented below, and in Appendix 1.

Results and discussion

We started our screening process by calculating Pearson's product-moment correlation coefficients in order to evaluate the inter-correlations amongst the items in each facet. We reviewed the inter-item correlations and eliminated items which did not have a substantial number of correlations greater than .30 as they would fail to meet minimum requirements for a subsequent factor analysis (Hair, Black, Babin, Anderson, & Tatham, 2005). Two items related to social engagement were rejected on this basis. With the remaining items, we conducted exploratory factor analyses for each facet of engagement. We carried out principal components analysis followed by an orthogonal, Varimax rotation (Kaiser, 1974). We used the commonly accepted latent root or Kaiser criterion (Kaiser, 1960, 1974), whereby only factors with eigen values greater than 1 are selected, to determine the number of factors extracted. To obtain the right balance between bandwidth and fidelity, we excluded items which loaded below $\pm .04$ on one of the extracted components from further analysis (Hair, et al., 2005). Two items related to intellectual engagement were dropped from further analysis.

The remaining 17 items (5 for affective engagement, 6 for each of social and intellectual engagement) had demonstrated sufficiently strong psychometric properties to be potentially included in our final measure of engagement. We evaluated the internal consistency of each facet by calculating Cronbach's alpha (Cronbach, 1951). We examined scale variance and item-to-total correlation for each item with the aim

of deriving a scale of minimum length, characterized by high internal reliability and high total score variance (DeVellis, 2003; Kline, 2000; T. J. B. Kline, 2005). The assessment of these criteria, together with a detailed inspection of the item content, formed the basis on which we chose the best nine items for our engagement measure.

The final item set was as follows. *Intellectual engagement* : 'I focus hard on my work'; 'I concentrate on my work'; 'I pay a lot of attention to my work'. *Social engagement*: 'I share the same work values as my colleagues'; 'I share the same work goals as my colleagues'; 'I share the same work attitudes as my colleagues'. *Affective engagement*: 'I feel positive about my work'; 'I feel energetic in my work'; 'I am enthusiastic in my work'.

We subsequently performed a confirmatory factor analysis with latent variable structural equation modeling (Jöreskog & Sörbom, 1993) using maximum likelihood estimation in AMOS 18.0 (Arbuckle, 2006). The overall model fit for a second-order structure with three facets as latent indicators of a higher order engagement factor was very strong: $\chi^2 = 64$; $df = 24$; $GFI = .95$; $SRMR = .04$; $RMSEA = .08$; $CFI = .98$. Model fit is usually considered good when χ^2/df falls below 3, and acceptable when χ^2/df is below 5. GFI and CFI values greater than .9 represent a good model fit, and for SRMR and RMSEA, values less than .08 indicate a good, and values between .08 and 1 indicate an acceptable model fit (Browne & Cudeck, 1993; Hu & Bentler, 1998; R. B. Kline, 2005).

Insert Figure 1 about here

As seen in Figure 1, all items loaded strongly on the intended facet with standardized factor loadings ranging from .82 to .94. Moreover, each dimension facet loaded strongly on the general engagement factor with standardized factor loadings of .73 for intellectual engagement, .60 for social engagement, and .98 for affective

engagement. The inter-facet correlations were statistically significant at the $p < .0001$ level, which indicates that the general factor is influencing each facet with a similar strength. The reliability of our engagement measure was strong for the overall construct ($\alpha = .91$) as well as for each facet, where the alpha values were .90 for intellectual engagement, .92 for social engagement, and .94 for affective engagement. Overall there was substantial empirical support for our measure.

Study 2

In Study 1 we demonstrated the reliability of the ISA engagement scale. Study 2 aimed to make a larger contribution to the engagement literature by considering the associations between engagement and three organisationally important outcomes: task performance, organisational citizenship behaviour (OCB) and turnover intentions. We focus on these factors since there is some prior evidence, which we review below, that engagement should be associated with each. Confirmation that our new measure could influence these important outcomes would provide useful additional evidence of its utility in the HRD and wider organisational context.

Performance

Engagement theory suggests that more engaged employees will perform better in their jobs. Empirical evidence supports this (Baumruk, 2004; Buckingham & Coffman, 1999; Halbesleben & Wheeler, 2008; Harter, Schmidt, & Hayes, 2002; Salanova, Llorens, Cifre, Martínez, & Schaufeli, 2003; Schaufeli & Bakker, 2004; Schaufeli, Martínez, Marqués-Pinto, Salanova, & Bakker, 2002; Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Kahn (1990) suggested that, based on norms of reciprocity, high levels of engagement will raise effort, motivation and performance when it is believed that individuals will receive valued rewards. More recently,

Halbesleben and Wheeler (2008) suggested that engagement generates a positive cycle of emotions and cognitions that function to improve performance.

Individual level performance has been operationalized in several different ways in the engagement literature. Salanova et al. (2003) used an objective measure of task performance in their study of teams. Performance appraisal data are high quality, yet are difficult to obtain (Huselid & Day, 1991; Mannheim, Baruch, & Tal, 1997). A typical alternative approach is to gather self-ratings of performance. In some studies, self-ratings are combined with other-ratings. For example, Halbesleben and Wheeler (2008) used a measure of task performance. This assesses aspects of work such as “adequately completes assigned duties”. They noted that this approach to performance is useful since it applies to a wide range of jobs and organisational contexts. In the current study, we are particularly interested in the concept of self-in-role since it is relevant to the state and enactment of engagement (Jones & Harter, 2004; Kahn, 1990). The notion of task performance is thus appropriate for our empirical investigation. Our first hypothesis is:

Hypothesis 1: Employee engagement will be positively associated with self-ratings of task performance.

Organisational Citizenship Behaviour

A second important outcome of engagement is Organisational Citizenship Behaviour (OCB). OCB is discretionary employee behaviour that goes beyond formal job descriptions and contributes to positive organisational functioning (Organ, 1988). OCBs are a potential outcome of engagement since the engaged state encompasses positive affect and motivates beneficial behaviours. Kahn (1990, 1992) proposed that engaged employees are likely to be more willing to initiate citizenship behaviours

because of their involvement in a positive cycle of input and rewarding outcomes.

Therefore, our second hypothesis is:

Hypothesis 2: Employee engagement will be positively associated with self-rating of organisational citizenship behaviour.

Turnover intentions

A third possible outcome of engagement is the intent to remain with the organisation. High engagement represents high levels of emotional and cognitive activity, and has been associated with positive emotional and mental well-being (Hallberg & Schaufeli, 2006; Schaufeli & Bakker, 2004; Sonnentag, 2003). These positive emotions and experiences associated with engagement are likely to interact with individuals' intent, actions and behaviours within organisations, and consequently influence their attachment to their role and their current employer.

Intention to turnover represents a common outcome measure for HRD practitioners (Shuck et al., 2011). Therefore, our third hypothesis is:

Hypothesis 3: Employee engagement will be negatively associated with the turnover intentions.

Method

Sample

Participants in Study 2 were 835 employees working for a retail organisation in the UK. Listwise deletion of missing data led to a usable sample of 759 respondents. 44.3% of the participants were male. The mean age was 40.38 years (s.d. = 10.14). The mean tenure was 10.51 years (s.d. = 8.76). Again, participants occupied a range of different roles across the organisation.

Procedure

1486 participants were emailed the invitation and survey link. Participants were informed about the purpose of the study and asked to respond within two weeks.

Measures

Task performance. A five-item scale from Janssen and Van Yperen (2004) was used to assess individual performance. We slightly altered the wording of the original scale to reflect the fact that employees were asked to self-rate their performance. A sample item was “I always complete the duties specified in my job description.” The response scale ranged from 1 (“strongly disagree”) to 7 (“strongly agree”). The Cronbach alpha for this scale was .80.

Organisational Citizenship Behaviour. We measured organisational citizenship behaviour with an eight-item scale developed by Lee and Allen (2002). Four items measured organisational citizenship behaviour towards the organisation and the individual, respectively. Sample items included: “Willingly given your time to help others who have work-related problems” and “Offered ideas to improve the functioning of the organisation”. The response scale ranged from 1 (“never”) to 7 (“daily”). The Cronbach alpha for this scale was .85.

Turnover Intentions. We measured turnover intentions using Boroff and Lewin’s (1997) two-item scale. A sample item was “During the next year, I will probably look for a new job outside my current employer.” The response scale ranged from 1 (“strongly disagree”) to 7 (“strongly agree”). The Cronbach alpha for this scale was .93.

The use of additional ratings could be useful, and provide somewhat more objective performance data. However, only self-ratings were available in this organisation. We proceeded with self-ratings while taking additional steps, following

recommendations by Podsakoff, MacKenzie, Jeong-Yeon and Podsakoff (2003), to limit problems associated with common method variance. As outcome measures, we used established scales only, explained the procedures to our participants, and guaranteed anonymity. Furthermore, we separated the measurement of the independent and dependent variables by placing them in different sections of the survey. Finally, we used filler items and different instructions to create a psychological separation between sets of variables (Podsakoff, et al., 2003).

Results and discussion

Cross-validation of the ISA Engagement Scale

We carried out another second-order confirmatory factor analysis to further cross-validate the ISA engagement Scale. Again, the 9-item model provided a good fit with our data: $\chi^2 = 128$; $df = 24$; $GFI = .96$; $SRMR = .03$; $RMSEA = .07$; $CFI = .98$. Each item loaded strongly and significantly on its intended facet with single loadings ranging from .82 to .95. The three facets loaded strongly on the general engagement factor: .33 for social engagement, .95 for affective engagement, and .73 for intellectual engagement. The results suggest that the general factor is driving all three facets significantly, the highest association was with affective engagement, and the lowest was with social engagement. Moreover, our measure demonstrated a strong reliability for the single facets (alphas were .88, .95 and .95 respectively) and for the overall measure of engagement ($\alpha = .88$).

Descriptive statistics and correlations

Table 1 presents the means and standard deviations for each scale, and inter-scale correlations for all Study 3 variables. All scales demonstrate good internal reliabilities above .70. The inter-scale correlations show the expected direction of association and are all significant at the $p < .01$ level. Our measure of engagement

was significantly correlated with all three outcomes measures with $r = .38$, $.31$ and $-.49$, respectively. Task performance and OCB were also positively and significantly correlated at $r = .21$. Moreover, turnover intentions were negatively correlated with task performance at $r = -.23$ and with OCB at $r = -.12$.

Insert Table 1 about here

Test of hypotheses

In our hypotheses, we proposed that engagement is significantly related to task performance, OCB and turnover intentions. We tested these hypotheses through regression analysis using SPSS 18.0. All three hypotheses were supported. Employee engagement explained 14% of the variance in performance, 10% of the variance in OCB and 24% of the variance in turnover intentions.

Insert Table 2 about here

We examined the relative importance of the three facets of engagement in order to get a more detailed picture of the concurrent validity of our engagement measure on task performance, OCB and turnover intentions. In addition to standardized regression coefficients, we computed two alternative indices of relative importance: dominance (Azen & Budescu, 2003; Budescu, 1993) and epsilon (Johnson, 2000). Relative importance indices calculate the proportional contribution of each variable in explaining a dependent variable, while taking into consideration its unique contribution and its contribution when combined with other independent variables (Johnson, 2000). The general dominance statistic (denoted D, calculated using dominance analysis 4.4 by James M. LeBreton) estimates the average squared semi-partial correlations across all possible subset regression analyses (LeBreton, Binning, Adorno, & Melcher, 2004). The resulting general dominance estimates are then rescaled by dividing them by the total variance explained in order to get an

indicator of the average importance of each predictor variable. The epsilon statistic (calculated using an SPSS syntax file provided by Jeff W. Johnson) creates a new set of uncorrelated predictor variables and combines two sets of standardized regression weights (Johnson, 2000; LeBreton, et al., 2004): the dependent variable regressed on the new set of uncorrelated predictors, and the original predictors regressed on the new set of uncorrelated predictors. The epsilon statistic establishes the contribution of each predictor to the overall variance explained, taking into account correlated predictors. Both statistics have been proposed as preferred indices of relative importance (LeBreton, et al., 2004).

Table 2 shows that the single facets explain more variance in the outcome variables compared to the overall factor with 19% in task performance, 11% in OCB and 32% in turnover intentions. Moreover, each facet significantly predicts at least one outcome variable. Social engagement is an important predictor of turnover intentions, while affective engagement and intellectual engagement predict all three outcome variables. Overall, our analysis reveals that all facets of engagement, as well as the overall factor, demonstrate good concurrent validity.

Conclusion

This study provides support for the ISA Engagement Scale, a new measure designed to assess individual level work engagement. Engagement was conceptualized as comprising three facets - intellectual, social and affective - each supported by prior theoretical and empirical evidence. The second order structure enabled operationalization that captured appropriate depth at the facet level (fidelity) and breadth for the overall multi-faceted construct (bandwidth). Data suggest that the new measure is suitable for use in organisations.

Contributions to HRD practice

The ISA Engagement Scale is relevant to the field of HRD both in general, as a comprehensive method of measuring employee reactions to their work environment, and in particular, as a tool for HR practitioners and employees to monitor engagement levels against HRD interventions. The evidence suggests that by creating work roles where employees can apply their knowledge and skills to rewarding tasks, HRD practitioners can impact engagement levels in various organisational contexts. The study thus contributes to the growing employee perspective on HRD (Poell & Van der Krogt, 2003; Poell, 2012). Increasing the engagement of employees through training and learning, and thereby creating a positive engagement cycle, should become an objective of all OD programs (Shuck et al., 2011). Furthermore, the study has shown that a focus on engagement is likely to be associated with positive outcomes targeted by HRD practitioners, including task performance, OCB and turnover intentions. Employee engagement has implications for all areas of HRD (Wollard & Shuck, 2011) and we encourage the use of the ISA Engagement Scale to develop these fields in both theory and practice.

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Figure 1: Results of confirmatory factor analysis for Study 1

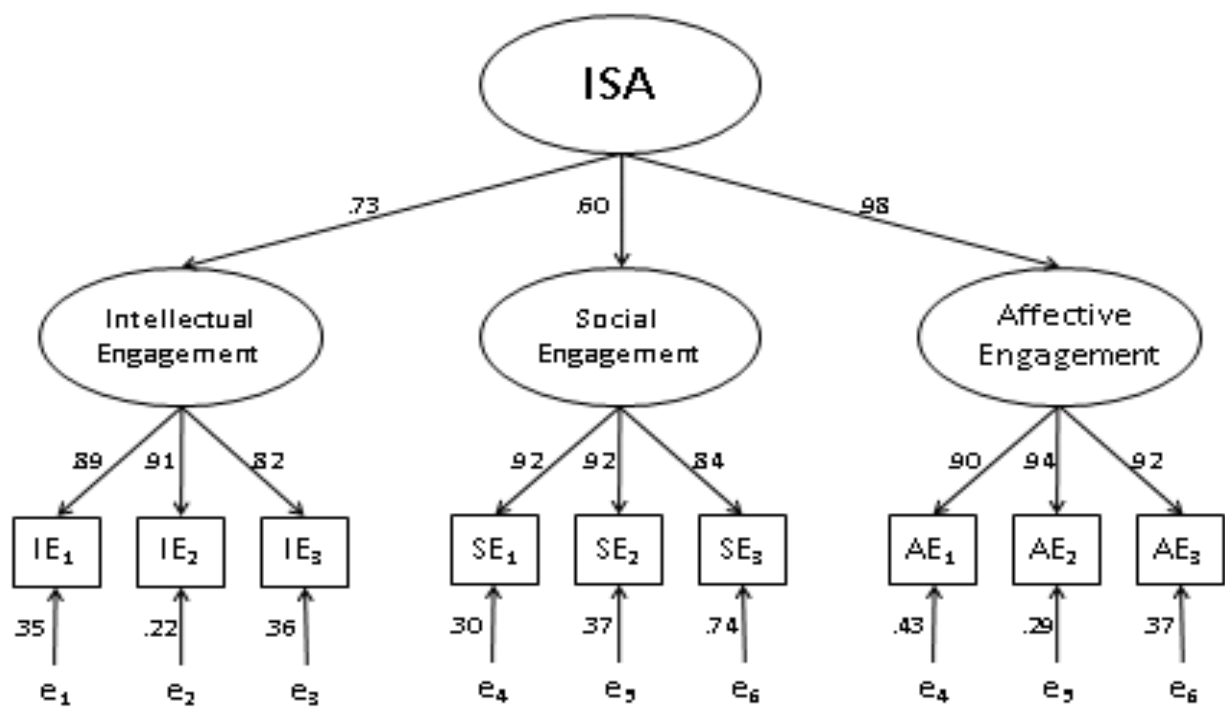


Table 1: Means, standard deviations, Cronbach's alpha and inter-scale correlations for Study 2 measures

	Alpha	M	SD	1	2	3	4
1. ISA Engagement Scale	.88	5.78	.79				
2. Task Performance	.80	6.15	.70	.38**			
3. OCB	.85	4.94	.96	.31**	.21**		
4. Turnover Intentions	.93	2.30	1.58	-.49**	-.23**	-.12**	

N = 759

** Correlation is significant at the .01 level (2-tailed)

Table 2: Relationship between ISA Engagement Scale, task performance, OCB and Turnover intentions

	Task Performance				OCB				Turnover Intentions			
	R ²	β	D	ε	R ²	β	D	ε	R ²	β	D	ε
	General Factor											
ISA Engagement Scale	.14*	.38*			.10*	.31*			.24*	-.49*		
	Specific Facets											
Social Engagement	.19*	.02	12.52	5.9	.11*	.04	6.70	45.5	32*	-.11*	14.5	18.2
Affective Engagement		.14*	39.55	76.3		.23*	57.6	12.4		-.56*	72.1	55.2
Intellectual Engagement		.32*	47.93	17.8		.11*	35.6	42.1		-.08*	13.4	26.6

N = 759

* p < .05

Appendix 1: The May et al. Engagement Measure (2004), The Utrecht Work Engagement Scale (Schaufeli, Salanova, et al., 2002), and ISA Engagement Scale

Measure	Construct	Sample items
May et al. (2004) Engagement Scale	Cognitive engagement	Performing my job is so absorbing that I forget about everything else I am rarely distracted when performing my job
	Emotional engagement	I really put my heart into my job I often feel emotionally detached from my job (r)
	Physical engagement	I exert a lot of energy performing my job I stay until the job is done
Utrecht Work Engagement Scale	Absorption	Time flies when I am working I feel happy when I am working intensely
	Dedication	I find the work that I do full of meaning and purpose

Vigor

I find my job challenging

I can continue working for very long periods at a time

In my job, I am mentally very resilient

ISA Engagement Scale

Intellectual engagement

I focus hard on my work

I concentrate on my work

I pay a lot of attention to my work

Social engagement

I share the same work values as my colleagues

I share the same work goals as my colleagues

I share the same work attitudes as my colleagues

Affective engagement

I feel positive about my work

I feel energetic in my work

I am enthusiastic in my work
