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Abstract
Universities have increasingly begun to emphasise the importance of leadership development program for academic leaders as they are the key players of the institutions. However, training programs are often not properly evaluated to determine return of investment. Transfer of training needs to be evaluated in order to justify the return of investment spent by stakeholders. Therefore, this paper aims to determine the influence of trainee characteristic (learner readiness and motivation to transfer), training design (perceived content validity and transfer design) and work environment factors (peer support and supervisor support) on transfer of training involving 120 academics who are currently working at two public universities in Malaysia. This paper adopts the Baldwin and Ford's (1988) transfer process model to investigate the relationships between the predictors and transfer of training. The respondents of this study participated in a one-day leadership development program, one and a half months prior to the data collection process. The findings of this study indicates that learner readiness, perceived content validity and peer support significantly influence transfer of training among the academics.
Keyword: Transfer of Training, Trainee Characteristic, Training Design, Work Environment, Academic, Leadership

Introduction
Globalization these days has influenced universities to be more proactive in recruiting and retaining effective academic workforce (Stigmar, 2008). In response to these current needs, leadership has become a crucial component that is needed at all levels within the institutions (Ladyshewsky & Flavell, 2012). This calls for leadership development programs for university academics. However, evaluation of training program remains a concern due to the institutions' lack of ability to measure whether the investment produces favourable return that will benefit the institutions and also the individuals themselves (Ladyshewsky & Flavell, 2012). Scholars have highlighted the importance of transfer of training as one of the most useful ways to evaluate

training programs (Chiaburu, Van Dam & Hutchins, 2010; Noe, 2017) as it is able to measure behavioural change in training participants (Mohanty, 2019; Gegenfurtner, 2020).

Transfer of training is defined as the extent to which a person is able to apply the knowledge, skills and attitudes gained from training programs to his/her job (Baldwin & Ford, 1988; Broad & Newstrom, 1992; Holton et al., 2000; Van Gramberg &Baharim, 2005; Burke & Hutchins, 2008; Baldwin et al., 2009; Lacerenza et al., 2017). Nevertheless, Ladyshewsky and Flavell (2012) defined transfer of training as a concept used to determine how well participants transfer learning from training programs to their workplaces in a lasting manner. Generally, there are three key factors that influence transfer of training: trainee characteristic, training design and work environment (Ng & Ahmad, 2018). Although there were many studies conducted on transfer of training, not many of them focus on transfer of training in the context of leadership among university academics. Most transfer of training studies focused on job performance in corporate or non-educational based sectors (e.g., Na-Nan & Sanamthong, 2019; Martin, Zerbini & Medina, 2019; Arasanmi, 2019).

Kirkpatrick's (1994) four-level evaluation model emphasised the importance of transfer of training in the field of training and development as it is able to measure training participant's behavioural change over time, following a training and development program. Research has found that training programs are frequently evaluated only through trainee's feedback (reaction level), not considering other reflective methods of training evaluation such as transfer of training (behavioural level) (Mohanty, 2019; Gegenfurtner, 2020). Furthermore, transfer of training is deemed as a crucial measure of an effective training in order to avoid 'training robbery' (Beer, Finnstorm & Schrader, 2016). Although scholars in the training and development field are gradually emphasising the importance of transfer of training in measuring training success (Chiaburu, Van Dam & Hutchins, 2010; Noe, 2017), limited studies were conducted to examine the predictors of transfer of training in the context of leadership development program among university academic leaders (Levine et al., 2015). Thus, the lack of empirical evidence with regards to factors influencing transfer of training in the context of leadership among university academics calls for further investigation. Hence, this paper aims to investigate factors influencing transfer of training among university academics in Malaysia, who participated in a leadership development program.

The research questions of this study are: 1) Do trainee characteristics (learner readiness and motivation to transfer) significantly influence transfer of training among university academics? 2) Do training design (perceived content validity and transfer design) significantly influence transfer of training among university academics? and 3) Do work environment (peer support and supervisor support) significantly influence transfer of training among university academics? Therefore, the research objectives of this study are:

1) To determine the influence of trainee characteristics (learner readiness and motivation to transfer) on transfer of training among university academics;

2) To determine the influence of training design (perceived content validity and transfer design) on transfer of training among university academics; and
3) To determine the influence of work environment factors (peer support and supervisor support) on transfer of training among university academics;

The following section of this paper will provide a literature review on an in-depth meaning of transfer of training and factors influencing transfer of training. The paper continues with the hypotheses and research framework of this study. The next section discusses the research procedures undertaken, the findings, and finally ends with a conclusion and recommendations.

Conceptualization of Transfer of Training
Researchers have been using transfer of training interchangeably with some other terms, such as transfer of learning, training transfer, learning transfer and transfer. Some scholars explicated that all these terms are not the same. For instance, Kuchinke (1995) explained that there is a difference between transfer of training and transfer of learning as transfer of training involves performance, while transfer of learning involves learning achievement. However, in the context of corporate training, transfer of training and transfer of learning are commonly referred to as the extent to which a person is able to apply the knowledge, skills and attitudes gained from training programs to his/her job (Baldwin et al., 2009; Lacerenza et al., 2017).

There are four fundamental types of transfer of training identified by scholars: 1) Positive; 2) Negative; 3) Near; and 4) Far. As explained by Leberman, McDonald and Doyle (2006), the first type of transfer, which is positive transfer takes place when learners apply gained knowledge from a training program to their work setting. In contrast, negative transfer occurs when learners failed to exhibit any improvement in their work performance after attending a training program. Sofo (2007) depicts near transfer as the ability to replicate knowledge, skills and attitudes learned during a training program in a situation very similar to the environs from which the knowledge, skills and attitudes were acquired. Far transfer on the other hand, is a situation where knowledge, skills and attitudes learned during a training program are applied in a different setting of work environment.

Baldwin and Ford's (1988) transfer process model were adopted to support the framework of the study. This model depicted that the transfer of training is influenced by three key factors: trainee characteristics; training design; and work environment. This theory is then widely recognised and used by other scholars in their transfer of training research (Holton et al., 2000; Velada et al., 2007; Bhatti & Kaur, 2010; Renta-Davids et al., 2014; Ng & Ahmad, 2018).

Trainee Characteristic (learner readiness and motivation to transfer) and Transfer of Training
According to Baldwin and Ford (1988), a wide variety of trainee characteristics influence training transfer. Prior research has shown that trainee success to engage in early stages of training influences transfer of training (Baldwin and Ford, 1988). Nonetheless, scholars have been studying trainee characteristics considerably, which were found to have an influence on transfer of training (Colquitt et al., 2000; Holton, 2005). Trainee characteristics were also found to be

significantly correlated with training transfer (Ng & Ahmad, 2018). Previous studies found that learner readiness, a dimension of trainee characteristics, can greatly influence transfer of training (Kulit et al., 2007). Furthermore, scholars found that trainees who are ready and well prepared for training programs are more likely to encounter fruitful application of learned knowledge and skills to their jobs (Bhatti et al., 2013; Hung, 2016). In terms of motivation to transfer, previous studies indicated that trainee's motivation to transfer prior to attending a training program influences transfer of training (Reinhold et al., 2018). Motivation to transfer is defined as trainees' desire to apply the knowledge and skills learned in training program to their jobs (Gegenfurtner et al., 2009a, 2009b; Grohmann et al., 2014; Paulsen & Kauffeld, 2017). Numerous literatures suggested that there is a significant, positive relationship between motivation to transfer and transfer of training (Chiaburu et al., 2010; Ng & Ahmad, 2018). Thus, it is hypothesized that:

$H1_a$: *Learner readiness significantly influences transfer of training among university academics.*
$H1_b$: *Motivation to transfer significantly influences transfer of training among university academics.*

Training Design (perceived content validity and transfer design) and Transfer of Training
Training design, according to scholars, is one of the most vital factors influencing transfer of training, explaining 65% of the variable (Kasim & Ali, 2011). Scholars suggested that perceived content validity – the extent to which training courses were related to trainees' workplace, is a crucial determinant of transfer of training (Yamnill & McLean, 2001; Renta-Davids et al., 2014; Nafukho et al., 2017). Training is transferred from training content to work context when trainees perceived that the training program was designed and delivered in such a way that maximises their ability to transfer training to their jobs (Holton, 2005; Velada et al., 2007). Previous studies further showed that transfer design, another dimension of training design factor significantly influences transfer of training (Velada et al., 2007). Transfer design can be defined as the degree to which training has been designed and delivered in such a way that provides trainees with the ability to transfer learning back to their jobs (Holton et al., 2000). Thus, it is hypothesized that:

$H2_a$: *Perceived content validity significantly influences transfer of training among university academic.*
$H2_b$: *Transfer design significantly influences transfer of training among university academic.*

Work Environment (peer support and supervisor support) and Transfer of Training

Previous studies found that work environment significantly influences transfer of training (e.g., Velada et al., 2007; Ertmer & Newby, 2013; Ng & Ahmad, 2018). Ng and Ahmad (2018) emphasised the influences of peer and supervisor support dimensions on transfer of training. Peer support describes the degree to which trainees feel supported by their colleagues to apply learned knowledge and skills to their jobs and that their colleagues support their work tasks in general (Burke & Hutchins, 2007). It is also described as the extent to which colleagues care and value trainees' contributions to the work (Blume et al., 2010). Scholars suggested positive relationship between peer support and transfer of training (Gegenfurtner et al., 2010; Reinhold et al., 2018). Other research demonstrated direct influence of peer support on transfer of training (Peters et al., 2014; Chauhan et al., 2016). Supervisor support on the other hand, can be defined as the extent to which trainees' supervisors/managers support trainees to use and apply what was learned in the training program back on the job (Kirwan & Birchall, 2006; Bates et al., 2012). Supervisor support has been shown to be positively related to transfer of training (Schindler & Burkholder, 2016; Reinhold et al., 2018). Nevertheless, trainees who believed that they have their supervisors' support prior to attending training program tend to initiate transfer activities better (Reinhold et al., 2018). Thus, it is hypothesized that:

$H3_a$: Peer support significantly influences transfer of training among university academics.
$H3_b$: Supervisor support significantly influences transfer of training among university academic.

Methodology
Research Framework

Independent variables   Dependent variable
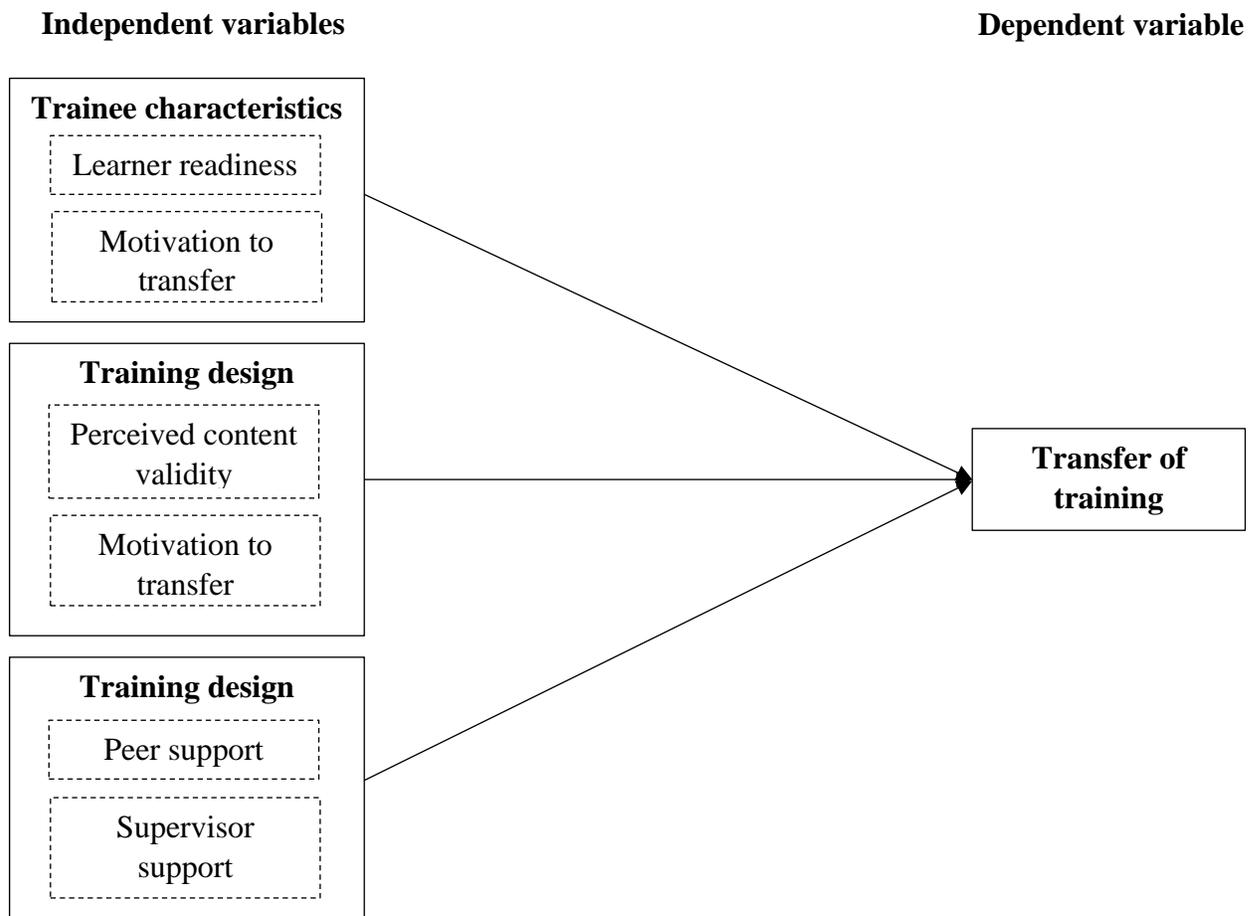

Figure 1. Research framework

Population and Sampling
This study was conducted among academics who are working at two public universities in Malaysia. The academics attended a leadership development program conducted by the researchers prior to the data collection process. The minimum sample size required for three predictors (trainee characteristics, training design and work environment) was identified using formula of n = 50+8k, where k represents the number of independent variable (Green, 1991), yielding a total of 74 respondents. The total number of respondents obtained for this study is 120, which is above the minimum sample size required. This researchers uses purposive sampling techniques in selecting training participants from the universities involved in this study. Table 1 illustrates the demographic profile of the respondents.

Table 1 shows that the majority of the respondents are female (55.80%), while 44.20% of them are male. Majority of them are between the age of 40 to 49 years old (58.30%), followed by 30 to 39 years old (26.70%) and 50 to 59 years old (15.00%). In terms of respondents' position in the

university, majority of them hold the position of Head of Department (34.20%), followed by Deputy Dean (31.70%), Subject Coordinator (13.30%), Senior Lecturer (10.80%) and Dean (10.00%). Furthermore, majority of the respondents have been working in their respective universities between 11 to 20 years (51.70%), followed by one to ten years (36.70%), 21 to 30 years (10.00%) and 31 to 40 years (1.70%).

Table 1. Demographic profile of the respondents

Variables	Freq.	Percentage	Mean (S.D)
Gender			
Male	53	44.20	
Female	67	55.80	
Age (years)			43.30 (5.55)
30-39	32	26.70	
40-49	70	58.30	
50-59	18	15.00	
Position			
Dean	12	10.00	
Deputy Dean	38	31.70	
Head of Department	41	34.20	
Subject Coordinator	16	13.30	
Senior Lecturer	13	10.80	
Duration of Service (years)			13.56 (6.90)
1-10	44	36.70	
11-20	62	51.70	
21-30	12	10.00	
31-40	2	1.70	

Instrument

This study uses survey questionnaire consisting of validated instruments to measure the variables involved. Transfer of training was measured using instruments developed by Facteau et al. (1995). The instrument consists of nine questions using a five-point Likert scale. A sample item of this instrument is "I am able to transfer the skills learned in training courses back to my actual job." Trainee characteristics (learner readiness and motivation to transfer) variable was measured using a five-point Likert scale of Holton et al.'s (2000) Learning Transfer System Inventory (LTSI). There are eight questions and sample questions are "Before the training I had a good understanding of how it would fit my job-related development" (learner readiness) and "I get excited when I think about trying to use my new learning on my job" (motivation to transfer).

Training design (perceived content validity and transfer design) variable was also measured using five-point Likert scale of Holton et al.'s (2000) LTSI. There are nine questions in total and sample questions are "What is taught in training closely matches my job requirements" (perceived content validity) and "The activities and exercises the trainers used helped me know how to apply my learning on the job" (transfer design). Work environment (peer support and supervisor support) variable too, was measured using five-point Likert scale of Holton et al.'s (2000) LTSI. There are ten questions in total and sample questions are "My colleagues encourage me to use the skills I have learned in training" (peer support) and "My supervisor set goals for me that encourage me to apply my training on the job" (supervisor support). Cronbach's alpha coefficients of the constructs ranged from 0.74 to 0.96.

Findings
Levels of trainee characteristics (learner readiness and motivation to transfer), training design (perceived content validity and transfer design) and work environment (peer support and supervisor support)
Table 2 illustrates that most academics (96.70%) rated high level of transfer of training following the training program. The remaining 3.30% of them rated moderate level of transfer of training. In terms of trainee characteristics, most of the academics (61.70%) rated moderate level of learner readiness, followed by high (36.70%) and low (1.70%) level of learner readiness. Other than that, 61.70% of the academics rated high motivation to transfer, followed by 33.30% of them rated moderate and the remaining 5.00% of them rated low level of motivation to transfer. As for training design variable, 100.00% of the academics rated high in perceived content validity and a majority of 98.30% of them rated high in transfer design, while only 1.70% of them rated moderate level transfer design. Nonetheless, work environment variable indicates that a hefty 71.70% of the academics rated moderate level of peer support, followed by 23.30% high and the remaining 5.00% of them rated low level of peer support. Finally, most (81.70%) academics rated moderate level of supervisor support, followed by 10.00% high and 8.30% low level of supervisor support.

Table 2. Levels of variables

Variables	Freq.	Percentage	Mean (S.D)
Transfer of training			4.16 (.42)
Low	0	0.00	
Moderate	4	3.30	
High	116	96.70	
Trainee characteristics			
Learner readiness			3.05 (.79)
Low	2	1.70	
Moderate	74	61.70	
High	44	36.70	
Motivation to transfer			3.63 (.92)
Low	6	5.00	
Moderate	40	33.30	
High	74	61.70	
Training design			
Perceived content validity			4.41 (.41)
Low	0	0.00	
Moderate	0	0.00	
High	120	100.00	
Transfer design			.54 (0.46)
Low	0	0.00	
Moderate	2	1.70	
High	118	98.30	
Work environment			
Peer support			3.07 (.73)
Low	6	5.00	
Moderate	86	71.70	
High	28	23.30	
Supervisor support			.76 (0.65)

Low	10	8.30
Moderate	98	81.70
High	12	10.00

Note: Low (0.00 – 1.67); Moderate (1.68 – 3.34); High (3.35 – 5.00)

Correlation between trainee characteristics (learner readiness and motivation to transfer), training design (perceived content validity and transfer design) and work environment (peer support and supervisor support) with transfer of training

Table 3 illustrates the correlation matrix between the variables used in this study. Learner readiness, perceived content validity and transfer design were found to be significantly correlated with transfer of training and therefore, these variables have predictive potential to transfer of training. The highest correlation coefficient is perceived content validity (r = .240, p = .005) followed by transfer design (r = .240, p = .008) and perceived content validity (r = .256, p = .005).

Table 3. Correlation matrix

Variables		Transfer of training	Learner readiness	Motivation to transfer	Perceived content validity	Transfer design	Peer support	Supervisor support
Transfer of training	r (p)	1	.188* (.039)	.103 (.262)	.256* (.005)	.240* (.008)	.136 (.137)	.011 (.901)
Learner readiness	r (p)		1	.609* (.000)	.137 (.136)	.147 (.108)	.246* (.007)	.368* (.000)
Motivation to transfer	r (p)			1	.288* (.001)	.189* (.039)	.397* (.000)	.496* (.000)
Perceived content validity	r (p)				1	.671* (.000)	-.194* (.034)	-.118 (.198)
Transfer design	r (p)					1	-.150 (.102)	-.129 (.160)
Peer support	r (p)						1	.690* (.000)
Supervisor support	r (p)							1

*Correlation is significant at 0.05 level of significance

Influence of trainee characteristics (learner readiness and motivation to transfer), training design (perceived content validity and transfer design) and work environment (peer support and supervisor support) on transfer of training

Table 4 indicates that learner readiness (β = .226, p = .043), perceived content validity (β = .254, p = .044) and peer support (β = .331, .008) significantly influence transfer of training. However, motivation to transfer, transfer design and supervisor support do not significantly influence transfer of training. Thus, *H1ₐ, H2ₐ* and *H3ₐ* are supported, while *H1ᵦ, H2ᵦ* and *H3ᵦ* are not supported. The adjusted R^2 value of .112 imply that learner readiness, perceived content validity and peer support explain 11.20% of variance in transfer of training. Results of the hypotheses are summarized in Table 5.

Table 4. Results of multiple linear regression

Variables	B	SE (B)	β	r	p
Transfer of training (Constant)	2.258	.499		4.524	.000
Trainee characteristics					
Learner readiness	.120	.058	.226	2.047	.043*
Motivation to transfer	-.078	.058	-.172	-1.345	.181
Training design					
Perceived content validity	.261	.128	.254	2.041	.044*
Transfer design	.087	.106	.096	.816	.416
Work environment					
Peer support	.190	.070	.331	2.702	.008*
Supervisor support	-.112	.083	-.173	-1.343	.182

Note: F = 3.489; Sig. F = .003; R = .395; R^2 = .156; Adjusted R^2 = .112
*Coefficient is significant at 0.05 level of significance

Table 5. Summary of hypotheses results

Hypothesis	Result
$H1_a$: Learner readiness significantly influences transfer of training among university academics.	Supported
$H1_b$: Motivation to transfer significantly influences transfer of training among university academics.	Unsupported
$H2_a$: Perceived content validity significantly influences transfer of training among university academic.	Supported
$H2_b$: Transfer design significantly influences transfer of training among university academic.	Unsupported
$H3_a$: Peer support significantly influences transfer of training among university academics.	Supported
$H3_b$: Supervisor support significantly influences transfer of training among university academic.	Unsupported

Conclusions and Recommendations

In a nutshell, this study has provided empirical evidence that trainee characteristics (learner readiness), training design (perceived content validity) and work environment (peer support) serve as a significant predictors of transfer of training in the context of leadership among university academics in public universities in Malaysia. The extent to which trainee is prepared to learn prior to attending training program is important to ensure successful transfer of training to work settings. Nevertheless, the extent to which trainee perceived the similarity between training content and his/her job indeed matters in order for transfer of training to occur. Apart from that, peer support towards trainee to apply learned knowledge and skills in the work place is also another vital factor that leads to a successful transfer of training.

This study expands training and development, and by extent human resource development literature by providing empirical evidence that further proved the influence of trainee characteristics (learner readiness), training design (perceived content validity) and work environment (peer support) on transfer of training in the context of leadership among university academics. Prior to implementing leadership development program, the findings of this study may assist researchers, academic leaders and human resource development units in universities to better emphasise the importance of trainee characteristics (learner readiness), training design (perceived content validity) and work environment (peer support) in contributing to a successful transfer of training. Since transfer of training was investigated in the context of leadership development program, this study additionally contributes to the amalgamation of training and development and leadership theories. This study, however, found insignificant influence of trainee characteristics (motivation to transfer), training design (transfer design) and work environment (supervisor support) on transfer of training among the university academics. Therefore, further empirical evidence is warranted to further investigate and validate the consistency of this study's framework.

Acknowledgement

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