Training Characteristics Affecting Motivation to Transfer in Online Training: An Empirical Evidence of Malaysian OSH Training

Siti Fardaniah Abdul Aziz[1], Mohammad Zainuddin Rosly[2], Mohd Nasir Selamat[3], & Ruzita Mohd Sharif[4]

[1, 3] Human Development Program, Psychology & Human Well-Being Research Centre, Faculty of Social Science & Humanities, Universiti Kebangsaan Malaysia, Malaysia, [2]Train Right Consultation, Kajang, Selangor, Malaysia, [4]National Institute of Occupational Safety and Health, Ministry of Human Resources, Bangi, Selangor, Malaysia
Corresponding Author Email: daniah@ukm.edu.my

Abstract
Motivation to transfer was found to be the most influential factor affecting most face-to-face training programs' effectiveness; in which, some researchers found that motivation to transfer could also affect the online training effectiveness. However, research reporting online training characteristics affecting the motivation to transfer have received little attention, although this information is needed to design a better online training that could maximize trainees' training motivation and effectiveness. Therefore, the purpose of this study is to determine the significant characteristics of online training that could affect trainees' motivation to transfer using a pre-experimental design among 88 participants who attended an online training program named the Occupational Health for Work from Home Program that was organized in Malaysia; the program is a collaboration program organized by the National University of Malaysia (UKM) and the National Institute of Malaysia (NIOSH). Findings indicated that several online training characteristics have significant effect on motivation to transfer including training relevant, followed by training reputation, and training design; in which, the online training characteristics have moderate effect size and explained 57.7% variance in the motivation to transfer. Additionally, several components of online training design are found to be significant factors affecting the motivation to transfer including the training objectives, followed by trainers' knowledge, and training method; in which, these explained 51.7% variance in the motivation to transfer in online training. This has proven that online training characteristics also have an influential effect on motivation to transfer as consistently as in most face-to-face training programs. Findings are important as a proof for training providers to organize online training programs with the right training characteristics especially when the numbers of online training programs have increased nowadays.

Introduction

Most previous researchers find that training motivation, such as the motivation to transfer is the most influential factor affecting employees' training effectiveness either in face-to-face or online training programs (Aziz et al., 2021; Fauth & González-Martínez, 2021). However, research reporting training characteristics affecting motivation to transfer in online training have received little attention (Chung et al., 2022; Fauth & González-Martínez, 2021). With the information, practitioners and training providers can do some interventions to design effective online training that finally can improve trainees' motivation to transfer, that subsequently improve the online. Therefore, the objective of this paper is to report the characteristics of an online training program that significantly affect trainees' motivation to transfer in online training programs using a pre-experimental research design. Without this kind of research, it is difficult for training providers to design effective online training that can increase trainees' motivation to transfer.

Literature Review

Studies related to training motivation affecting training effectiveness for face-to-face training programs have been widely reported; in which, various types of training motivation have been reported to be the most influential factor for training effectiveness by previous researchers (Colquitt et al., 2000; Saputro & Syaebani, 2024). These include the effect of pre-training motivation (e.g., Noe, 1986; Matiba, 2024), motivation to learn (e.g., Klein et al., 2006; Ismail et al., 2024), and motivation to transfer (Kontoghiorghes, 2004; Andoh et al., 2024) on training effectiveness. Among various types of training motivation, the motivation to transfer has been widely researched as the most influential factor affecting training effectiveness, such as those by Kontoghiorghes (2004); Blume et al. (2010); and Silva & Pinto (2024). Hence, it can be seen that motivation to transfer plays a vital role in determining training effectiveness. Therefore, training characteristics affecting the motivation to transfer is very important as a guideline to design effective training programs. However, research reported online training characteristics affecting trainees' motivation to transfer have not been widely researched as much as face-to-face training program characteristics.

Aziz and Ahmad (2011), and Aziz and Selamat (2016), reported that several training characteristics in face-to-face training are affecting training motivation that finally increased training effectiveness; these include training relevance, training reputation, training design, and familiarity of training content. Hence, it is demonstrated that these characteristics in online training can also affect trainees' motivation to transfer.

For example, several researchers including Facteau et al. (1995); Aziz and Selamat (2016); and Schettino et al. (2024) find that the reputation of training can affect trainees' training motivation either in face-to-face or online training. Hence, it can be hypothesized that:

Ha1: Online training reputation has a significant effect on trainees' motivation to transfer at 0.05 level of significance

In addition, several researchers including Axtell et al. (1997); Aziz and Selamat (2016); and Andoh et al. (2024) find that the relevance of training content can affect trainees' motivation to transfer in face-to-face training. Hence, it can be hypothesized that:

Ha2: Online training relevant has a significant effect on trainees' motivation to transfer at 0.05 level of significance

Additionally, several researchers including Klein et al. (2006); Aziz and Selamat (2016); and Stumbrienė et al. (2024), find that the training design can affect trainees' training motivation either in online or face-to-face training. Hence, it can be hypothesized that:

Ha3: Online training design has a significant effect on trainees' motivation to transfer at 0.05 level of significance

Meanwhile, several researchers including Tai (2006); and Ergashevich (2024) find that the training content familiarity can affect trainees' training motivation in training programs. Hence, it can be hypothesized that:

Ha4: Online training design has a significant effect on trainees' motivation to transfer at 0.05 level of significance

On the other hand, several components of training design in online training should be studied further to develop the right training characteristics that can increase trainees' motivation to transfer in online training. According to Kirkpatrick and Kirkpatrick (2010), several face-to-face training designs are perceived as important based on trainees' perception; these include trainees' perception on training objective, material, method, management, facility, trainers' knowledge, and trainers' delivery capabilities. These training design components are usually studied based on trainees' positive reaction, such as those research by Bell and Ford (2007); Awais-Bhatti et al. (2014); Aziz (2016); and Bhat and Rainayee (2024), in face-to-face training program. Hence, it can be hypothesized that:

Ha5: Online training design components including trainees' perception on training objective, material, method, management, facility, trainers' knowledge, and trainers' delivery capabilities have a significant effect on trainees' motivation to transfer at 0.05 level of significance

Methodology
To determine the effect of online training characteristics on trainees' motivation to transfer, a pre-experimental research was organized among 88 participants who attended an online training program named the *Occupational Health for Work from Home Program* that was organized in Malaysia; the program is a collaboration program organized by the National University of Malaysia (UKM) and the National Institute of Malaysia (NIOSH). The program was also registered with the formal portal for student activities named "i-star" with registration code C-SKPM2093-2021-192. The online training program was organized in a day and free of charge; in which, it was advertised via social media and attended by staff from UKM and NIOSH, as well as the public. The online training was organized on 24th December 2021 as the pre-experimental research with an objective to increase trainees' health practice

while working at home during Pandemic COVID-19. These participants have given their consent to be involved in the research and were treated as the subject of pre-experimental research.

Items measuring online training characteristics were adapted from Aziz and Selamat (2016). There were three items measuring training reputation; sample item was "The online training organized by UKM-NIOSH usually offers quality training content". In addition, there were three items measuring training relevant; sample item was "The online training can help me improve my current job performance". Additionally, there were three items measuring training content familiarity; sample item was "Previously, I used to attend training that delivers training content that is similar as this training programme". Meanwhile, there were three items measuring training design; sample item was "In overall, the teaching method used in this training programme combined various interesting techniques.". All the 12 items adapted from the original questionnaire remained with Alpha Cronbach value 0.970.

Further, items measuring the components of online training design were adapted from Kirkpatrick and Kirkpatrick (2010) that were previously used to measure trainees' reaction to training program characteristics' satisfaction. There were seven components measured as the training design components; in which, each component had accepted Alpha Cronbach value more than 0.7. These include trainees' perception on training objective (4 items with $\alpha=0.955$), material (2 items with $\alpha=0.886$), method (4 items with $\alpha=0.923$), management (2 items with $\alpha=0.782$), facility (2 items with $\alpha=0.835$), trainers' knowledge (2 items with $\alpha=0.980$), and trainers' delivery capabilities (2 items with $\alpha=0.853$). In sum, there were 31 items in the first version of questionnaire measuring the seven components of training design; however, after reliability analysis, only 18 items remained in the final analysis with Alpha Cronbach value 0.985. Sample item for trainees' perception on training objective was "This training program has clear objectives"; for training material was "The course materials provided is sufficient"; for training method was "The training activities held during the training course are very useful"; for training management was "The secretariat manages training registration well"; for training facility was "The online training platform is easy to use and is conducive"; for trainers' knowledge was "The facilitator demonstrated good mastery of the course materials"; and for trainers' delivery capabilities was "The facilitator's delivery performance met my expectations".

Further, the motivation to transfer in training was measured using 3 items adapted from Aziz (2018). Sample items were "I will try to think about how to apply the skills that I have learned in this training". The 3 items measuring motivation to transfer remained in this study after reliability analysis with Alpha Cronbach value 0.956. All items in the questionnaire were in positive statements and used 10 scales; in which, trainees need to choose based on score 1 (Strongly Disagree) and score 10 (Strongly Agree) to demonstrate their agreement with the given statements in the questionnaire item.

Using a pre-experimental design, questionnaires were distributed to be answered by trainees in two different times including during break time in the online training (Time 1), and after the completion of training (Time 2). At time 1, trainees' were asked to answer questionnaires measuring the online training characteristics and components of training design. At time 2, trainees' were asked to answer questionnaires measuring motivation to transfer for the

online training. Data were collected using online Google Form and analysed using SPSS version 26 to test the research hypotheses. To determine the effect of online training characteristics and components of training design on the motivation to transfer, a Multiple Linear Regression was used.

Findings and Discussion
Overall, findings indicated that 88 respondents of online training have various demographic variables; however, the various demographic variables did not affect trainees' motivation to transfer. In addition, findings indicated that several online training characteristics have significant effect on the motivation to transfer including training relevant, followed by training reputation, and training design; in which, the online training characteristics have moderate effect size and explained 57.7% variance in the motivation to transfer. Additionally, several components of online training design are found to be significant factors affecting the motivation to transfer including the training objectives, followed by trainers' knowledge, and training method; in which, these explained 51.7% variance in the motivation to transfer.

Table 1 shows various demographic variables among respondents, in which, majority of respondents were females (80.7%), aged in 20s (40.9%), Malay race (90.9%), Islam religion (92%), came from T20 background with family income more than RM11820 per month, and work as lecturer (52.3%). These can be seen as the characteristics of participants (trainees) that are interested in occupational health programs.

Table 1
Demographic Variables of Respondents

Demographic	Group	Frequency	Percentage
Gender	Male	17	19.3
	Female	71	80.7
		88	100
Age	20 to 29 years old	36	40.9
	30 to 39 years old	31	35.2
	40 to 49 years old	15	17.0
	50 to years old	6	6.8
		88	100.0
Race	Malay	80	90.9
	Chinese	3	3.4
	Indian	5	5.7
		88	100
Religion	Islam	81	92.0
	Hindu	4	4.5
	Buddha	3	3.4
		88	100
Family Income	Less than RM5251 (B40)	17	19.3
	RM5252 to RM11819 (M40)	25	28.4
	More than RM11820 (T20)	46	52.3
		88	100
Job	Lecturer	32	36.4
	Administrative Officer	19	21.6
	Construction Worker	5	5.7
	Researcher	2	2.3

Lab Assistant	4	4.5
Operations Assistant	3	3.4
Assistant Registrar	1	1.1
Science Officer	2	2.3
Self-Employed	1	1.1
Psychological Officer	1	1.1
Driver	1	1.1
Nurse	1	1.1
Assistant Liaison Officer	1	1.1
Teacher	2	2.3
Technician	4	4.5
Library Assistant	1	1.1
Part-Time Worker	1	1.1
Office Secretary	5	5.7
Government Officer	1	1.1
Assistant Technology Officer	1	1.1
	88	100.0

Since, there are various demographic variables, an independent sample t-test and one-way ANOVA were tested to make sure these demographic variables did not have significant effect on trainees' motivation to transfer in the online training. Findings indicated that there was no significant difference in different groups in these demographic variables demonstrating that demographic variables were not affecting motivation to transfer in online training. However, the results are not shown as all of the analysis were not significant and were not part of research objectives or hypotheses.

Further, Table 4, Table 5, and Table 6 show the results of multiple linear regression to determine online training characteristics that have significant effect on the motivation to transfer. Findings indicated that online training characteristic has significant effect ($p = 0.000$) and explained 57.7% variance in the motivation to transfer; in which, according to Ferguson (2009), the effect is moderate. Additionally, few characteristics of online training characteristic that significantly affect motivation to transfer were training relevant ($\beta = 0.436$, $p = 0.000$), followed by training design ($\beta = 0.382$, $p = 0.014$), and training reputation ($\beta = 0.335$, $p = 0.004$). However, the training content familiarity was not a significant online training characteristic affecting the motivation to transfer ($p = 0.92$). Hence, hypotheses Ha1, Ha2, and Ha3 are accepted; meanwhile, hypothesis Ha4 is rejected.

Findings are consistent with research by Aziz and Selamat (2016) that found training design and training reputation or training relevant were significant training characteristics affecting training motivation in face-to-face training; however, training content familiarity was not a significant effective training characteristic. However, the current research contributes to the body of knowledge by verifying that these characteristics also affect trainees' motivation to transfer in online training. The current research verifies that training relevant and training reputation in online training will increase trainees' motivation to transfer; this is supported by research by Schettino et al. (2024) that find training reputation in online training could affect training effectiveness, while Andoh et al. (2024) also find that training relevant as significant training characteristic affecting training effectiveness. In addition, Andoh et al. (2024) find that motivation to transfer has a significant effect on online training effectiveness.

Additionally, Stumbrienė et al. (2024), find that training design can affect trainees' training motivation in online training. Hence, effective online training characteristics are very important in stimulating trainees' training motivation especially the motivation to transfer.

Table 2
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.772[a]	.596	.577	.63692	2.294

    a. Predictors: (Constant), Training Design, Training Relevant, Training Reputation, Training Content Familiarity
    b. Dependent Variable: Motivation to Transfer

Table 5
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.712	4	12.428	30.636	.000[b]
	Residual	33.670	83	.406		
	Total	83.383	87			

    a. Dependent Variable: Motivation to Transfer
    b. Predictors: (Constant), Training Design, Training Relevant, Training Reputation, Training Content Familiarity

Table 6
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	2.470	.677		3.649	.000		
	Training Relevant	.411	.095	.436	4.333	.000	.480	2.081
	Training Reputation	.271	.092	.335	2.932	.004	.374	2.676
	Training Content Familiarity	-.290	.170	-.291	-1.702	.092	.166	6.027
	Training Design	.339	.135	.382	2.510	.014	.210	4.763

    a. Dependent Variable: Motivation to Transfer

Furthermore, Table 7, Table 8, and Table 9 show the results of multiple linear regression to determine the components of online training design that has significant effect on the motivation to transfer. Findings indicated that online training design has significant effect (p = 0.000) and explained 51.7% variance in the motivation to transfer without the existence of other training characteristics; in which, according to Ferguson (2009), the effect is moderate. Additionally, few components of online training design that significantly affect motivation to transfer were training objective (β = 0.976, p = 0.006), followed by trainers' knowledge (β = 0.599, p = 0.017), and training method (β = 0.511, p = 0.040). However, the training materials (p = 0.111), training management (p = 0.961), training facility (p = 0.804), and trainers' delivery

capabilities (p = 0.749) were not significantly affecting the motivation to transfer in online training. Hence, hypothesis Ha4 is partially accepted.

Findings are also consistent with previous researchers that find some training design can affect training motivation and subsequently training effectiveness in face-to-face training, such as those by Bell and Ford (2007); Awais-Bhatti et al. (2014); and Bhat and Rainayee (2024). However, the current research verifies that several components of training design were effective to stimulate trainees' motivation to transfer in online training; these include the training objectives, followed by trainers' knowledge, and training method.

Table 7
Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.745[a]	.556	.517	.68049	1.990

a. Predictors: (Constant), Training Facility, Trainers' Delivery Capabilities, Training Method, Training Management, Trainers Knowledge, Training Objective, Training Material
b. Dependent Variable: Motivation to Transfer

Table 8
ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	46.337	7	6.620	14.295	.000[b]
	Residual	37.046	80	.463		
	Total	83.383	87			

a. Dependent Variable: Motivation to Transfer
b. Predictors: (Constant), Training Facility, Trainers' Delivery Capabilities, Training Method, Training Management, Trainers Knowledge, Training Objective, Training Material

Table 9
Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	3.313	.587		5.648	.000		
	Training Objective	.747	.263	.976	2.836	.006	.047	21.325
	Training Materials	.468	.290	.572	1.613	.111	.044	22.638
	Training Method	.401	.192	.511	2.085	.040	.092	10.832
	Trainers' Delivery Capabilities	.059	.183	.074	.321	.749	.106	9.465
	Trainers' Knowledge	.484	.199	.599	2.433	.017	.092	10.897
	Training Management	.009	.195	.011	.049	.961	.100	10.049
	Training Facility	-.042	.169	-.059	-.249	.804	.100	9.988

b. Dependent Variable: Motivation to Transfer

Conclusion

In conclusion, the purpose of this study is to determine the significant characteristics of online training that could affect trainees' motivation to transfer using a pre-experimental design among 88 participants who attended an online training program named the Occupational Health for Work from Home Program that was organized in Malaysia in the year 2021; the program is a collaboration program organized by the National University of Malaysia (UKM) and the National Institute of Malaysia (NIOSH). Findings indicated that several online training characteristics have significant effect on motivation to transfer including training relevant, followed by training reputation, and training design in the online training; in which, the online training characteristics have moderate effect size and explained 57.7% variance in the motivation to transfer. Additionally, several components of online training design are found to be significant factors affecting the motivation to transfer including the training objectives, followed by trainers' knowledge, and training method; in which, these explained 51.7% variance in the motivation to transfer. This has proven that online training characteristics also have an influential effect on motivation to transfer as consistently as in most face-to-face training programs. Findings are important as a proof for training providers to organize online training programs with the right training characteristics especially when the numbers of online training programs have increased nowadays.

Acknowledgement

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