

Online Training Motivation among University Students: The Role of Demographic Variables

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Abstract

Training motivation is found to be the most influential factor affecting training effectiveness in most face-to-face training; in which, research related to demographic variables affecting training motivation are studied to increase training motivation by targeting specific group intervention. However, research related to demographic variables affecting online training motivation among university students is limited although the organization of online training among university students have increased. Therefore, the aim of this research was to determine the effect of demographic variables on online training motivation among university students using a pre-experimental research design. An online training related to undergraduate entrepreneurship was organized among university students in a Malaysian university. A total of 37 university students aged 18 to 25 years old were involved in this study; data were analyzed using SPSS software. Findings indicated that only experience attending online training was a significant demographic variable affecting online training motivation; however, other demographic variables including age, gender, race, religion, family income, and experience owning business were insignificant variables affecting training motivation. Research limitations, implications, and future research suggestions were further discussed.

Keywords: Demographic Variable, Online Training Motivation, Malaysian University Students, Training Effectiveness, Human Resource Development, Human Development, Pre-Experiment

Introduction

Research focusing factors affecting online training effectiveness is important to improve the training effectiveness (Shukla, Dash & Kumar, 2024). This is because the organization of online training programs have increased since pandemic COVID-19 among various types of participants including school students, university students, employees, and the society (Aziz, Hussein, Husin & Ibrahim, 2022). Interestingly, training motivation was not only proven to be the most important factor affecting face-to-face training (Colquitt, LePine & Noe, 2000; Andoh, Annan-Prah, Boampong, Jehu-Appiah, Korsah & Owusu, 2024), but also demonstrated in online training (Chung, Zhan, Noe & Jiang, 2022; Aziz, Rosly, Omar, Selamat

& Mohd, 2024). Hence, research related to factors affecting online training motivation have also risen (Shukla et al., 2024).

However, research related to demographic variables affecting online training motivation is still limited although the effect of demographic variables in face-to-face training were studied by previous researchers (e.g., Tharenou, 2001; Štrbac, Paunović, & Pavlović, 2024). Information about demographic variables affecting training motivation can help Human Resource Development (HRD) practitioners to design effective training programs that can fulfil the diverse needs of training participants (Mofokeng, Amoa-Gyarteng & Dhliwayo, 2025). In fact, research related to demographic variables affecting training motivation and effectiveness should use various samples, such as the university students instead of only employees since training has been offered to other types of participants (Aziz & Selamat, 2018; Aziz et al., 2022). Therefore, the aim of the current research is to study demographic variables affecting online training motivation among university students in a Malaysian university.

Literature Review

According to the Integrative Theory of Training Motivation by Colquitt et al. (2000), training motivation is the most important factor that mediates the relationship between various independent variables and various measurements of training effectiveness. The theory was developed using a meta-analysis to analyze researches related to factors affecting training effectiveness before the year of 2000; in which, Chung et al. (2022) updated the theory using similar methods since the organization of online training have risen in recent years. Hence, Chung et al. (2022) have updated that training motivation is not only an important mediator in employees' face-to-face training but also is demonstrated in training that involves online or hybrid methods as a whole.

In both research by Colquitt et al. (2000) and Chung et al. (2022), some demographic variables were found to affect training motivation and effectiveness. Hence, the effect of various demographic variables on online training motivation should be tested using different types of participants, such as the university students. This is because according to Aziz et al. (2022), nowadays, training is not only offered to employees but also other types of participants. However, Aziz (2018a) argues that the effect of various demographic variables on training motivation can be varied; in which some researchers find it to be significant variables affecting training motivation but some researchers find the other way around.

For example, age was proven to affect training motivation in employees' face-to-face training by several researchers including Colquitt et al. (2000), Tharenou (2001), and Chen, Holton and Bates (2006). Both Colquitt et al. (2000) and Tharenou (2001) find that age had a significant and negative effect on training motivation; in which, the level of training motivation decreased among older employees attending training. However, Chen et al. (2006) find that age has significant positive effect on motivation to transfer; meanwhile, Aziz et al. (2024) found that age had no significant effect on participants' training motivation attending online training related to business competencies among the Malaysian youth. Hence, the effect of age on online training motivation among university students is vague. Therefore, a null hypothesis is constructed to be tested as follow:

H_{01} = There is no significant difference of online training motivation scores among different ages of university students at 0.05 level of significance.

Further, several researchers find that gender had no significant effect on training motivation either in face-to-face training (e.g., Iqbal & Dastgeer, 2017) or online training (e.g., Aziz et al., 2024). However, gender was proven to affect learning motivation by several researchers, including Tharenou (2001) and Simmering, Posey and Piccoli (2009). Simmering et al. (2009) did research among college students and found that gender had a significant effect on participants' motivation to learn in online learning courses. However, according to Aziz et al. (2022), the training program is not similar to online learning; in which, training is an educational program to provide participants with appropriate competencies that is not taught in formal education. Hence, the effect of gender on online training motivation among university students is vague. Therefore, a null hypothesis is constructed to be tested as follow: H_{02} = There is no significant difference of online training motivation scores between different genders of university students at 0.05 level of significance.

In addition, several researchers have studied the effect of different races on training effectiveness; for example, Punksungka, Yamashita, Helsinger, Karam, Cummins, and Kramer (2022) find that there was higher involvement in training for other races than White race in the U.S.. However, Aziz et al. (2024) demonstrated that race and religion were insignificant demographic variables affecting training motivation in online training although research related the effect of these variables on online training among university students was not explored yet. Therefore, null hypotheses are constructed to be tested as follow:

H_{03} = There is no significant difference of online training motivation scores among different races of university students at 0.05 level of significance.

H_{04} = There is no significant difference of online training motivation scores among different religions of university students at 0.05 level of significance.

Additionally, Aziz et al. (2024) found that family's income level was not a significant demographic variable affecting youth's training motivation in online training. However, Tharenou (2001) found that job status had a significant and negative effect on employees' motivation to participate in training; in which, the job status demonstrates the effect of income levels on employees' training motivation. Hence, it can be seen that the effect of family's income on online training motivation among university students is vague. Therefore, a null hypothesis is constructed to be tested as follow:

H_{05} = There is no significant difference of online training motivation scores among different family's income levels of university students at 0.05 level of significance.

Further, job tenure or experience was found to be an insignificant demographic variable affecting motivation to transfer by Iqbal and Dastgeer (2017). However, job tenure was proven to affect training motivation by several researchers, including Tharenou (2001) and Chen et al. (2006). Tharenou (2001) did research among employees working with the private and public sector in Australia and found that job tenure had a negative effect on participants' motivation to participate in training. Hence, job tenure or experience of participants regarding training content can have effect on their training motivation; in which, since the online training that will be studied in the current research involving university students'

entrepreneurship, experience of owning business can be seen to affect their online training motivation. Therefore, a null hypothesis is constructed to be tested as follow:

H₀₆ = There is no significant difference in online training motivation scores among different experiences of owning business by university students at 0.05 level of significance.

Furthermore, computer literacy was found to be a significant demographic variable affecting training effectiveness in most of the studies related to online learning, such as those by Shukla et al. (2024), and Ahmed, Sultana, Rokonuzzaman and Hossain (2025). However, Aziz et al. (2024) found that participants' experience of attending online training (which demonstrates their computer literacy) was not a significant demographic variable affecting their training motivation. Hence, the effect of participants' experience of attending online training on online training motivation among university students is vague. Therefore, a null hypothesis is constructed to be tested as follow:

H₀₇ = There is no significant difference of online training motivation scores between different experiences of attending online training among university students at 0.05 level of significance.

Methodology

An online training related to undergraduate entrepreneurship was organized as a closed-participation among university students enrolled at the Universiti Kebangsaan Malaysia/UKM (The National University of Malaysia); in which, the program was used as the pre-experimental study. The online training was organized on 29th May 2021 and was participated by 37 undergraduates aged 18 to 25 years old. As a part of online training participation requirement, these participants have also agreed to be involved as the pre-experimental research subjects. Participants were given a link of Google Form in a pre-registration a week before the training was organized to answer questionnaires related to their demographic variable. Then, right before the training started, they were asked to answer a questionnaire related to online training motivation. The online training and all questionnaires were delivered in Malay language.

The organization of the online training was handled by a group of students registered for SKPM2093 subject (Training Management and Behavior Modification) with lecturer's supervision; in which, it was registered using code C-SKPM2093-2021-72 with UKM's formal portal named i-star for students' program. Three speakers were invited as the trainer in the online training including an undergraduate student from the university that owned a perfume business, a businessman from a private company that owned a movie production company, and a lecturer with PhD. in related expertise.

To measure online training motivation, 6 items measuring essential training motivation by Aziz (2018b) were adapted in Malay language; sample item was "I try to learn as much as I can from this training". The Alpha Cronbach reliability value for these 6 items among the 37 participants was 0.961; participants needed to choose one score between scale 1 (strongly disagreed) to scale 10 (strongly agreed) to respond to each item. Meanwhile, for demographic variables, there were seven questions that participants needed to choose only one answer; however, one question about age was using a short open question.

All scores were coded into dummy coding for hypothesis testing; these include questions about gender (Male=1; Female=2), race (Malay=1, Chinese=2, Indian=3, Other=4), religion (Islam=1, Christian=2, Buddha=3, Hindu=4, Other=5), family income level (Less than RM5251 /B40=1; RM5252 to RM11819 /M40=2; More than RM11820 /T20=3), experience owning business (No=1; Had=2; Have=3), and experience attending online training (Yes=1, No=2). However, for age, participants need to state their true age for the current year; in which, the data were later recode into age groups (18 y/o=1; 19 y/o=2; 20 y/o=3; 21 y/o=4; 22 y/o=5; 23 y/o=6; 24 y/o=7; 25 y/o=8).

Data were analyzed using SPSS (Statistical Package for Social Sciences) version 26. To test hypotheses for H_{01} , H_{03} , H_{04} , H_{05} and H_{06} , the one-way ANOVA was used. Meanwhile, to test hypotheses for H_{02} , and H_{07} , an independent sample t-test was used. Additionally, a Pearson correlation was also used to explore the relationship between variables.

Findings and Discussion

Findings indicated that only experience of attending online training had significant correlation with the online training motivation attended by the university students; however, other demographic variables including age, gender, race, religion, experience owning a business, and family income level were insignificant demographic variables. This is supported by hypothesis testing; in which, when proceeded with comparison analysis, only experience of attending online training had a significant difference of online training motivation between those that used to attend and those that had no experience attending online training. Findings partially supported the Theory of Training Motivation by Colquitt et al. (2000) that was later updated by Chung et al. (2022).

Table 1 shows the cross correlation between all variables using Pearson correlation to explore the possibility of significant demographic variables affecting participants' online training motivation. Results indicated that only experience of attending online training had significant correlation ($r = -0.328$, $p = 0.05$) with the online training motivation attended by the university students; however, other demographic variables including age, gender, race, religion, experience owning business, and family income level were insignificant demographic variables.

Further Table 2 shows the one-way ANOVA results to determine significant differences among age groups (18, 19, 20, 21, 22, 23, 24, 25). Findings indicated that there is no significant difference between age groups as determined by one-way ANOVA [$F(7,29) = 0.891$, $p = .526$]. Hence, H_{01} (there is no significant difference of online training motivation scores among different ages of university students at 0.05 level of significance) failed to be rejected. Finding is inconsistent with some research that found age to affect training motivation among employees including those by Colquitt et al. (2000), Tharenou (2001), and Chen et al. (2006). However, finding is consistent with research by Aziz et al. (2024) that found age to have no significant effect on training motivation and effectiveness using samples among youths aged 19 to 26 years old attending online training related to entrepreneurship. It is believed that age was found to have no significant effect on online training motivation among youth but might have effect on other categories of age, such as the adult. This is explained by a research by Chen et al. (2006) that used samples from a wide range of age among adult employees from as early as the age at beginning career (20s) to almost retire (60s). Hence, it is believed

that age among youth will not affect online training motivation; in which, age is not a significant demographic variable affecting university students' online training motivation.

Table 1
Correlations

		Age	Race	Religio n	Family Incom e	Gende r	Experienc e attending online training	Experienc e owning Business	Online Training Motivatio n
Age	Pearson Correlatio n	1	-.114	-.034	-.042	-.317	-.098	.046	-.104
	Sig. (2- tailed)		.501	.843	.804	.056	.563	.788	.541
	N	37	37	37	37	37	37	37	37
Race	Pearson Correlatio n	-.114	1	.712**	-.301	.394*	-.004	.045	.125
	Sig. (2- tailed)	.501		.000	.070	.016	.982	.789	.462
	N	37	37	37	37	37	37	37	37
Religion	Pearson Correlatio n	-.034	.712*	1	-.192	.345*	.174	-.253	-.052
	Sig. (2- tailed)	.843	.000		.254	.036	.303	.131	.758
	N	37	37	37	37	37	37	37	37
Family Income	Pearson Correlatio n	-.301	-.301	-.192	1	-.092	.287	-.098	-.270
	Sig. (2- tailed)	.804	.070	.254		.589	.085	.563	.107
	N	37	37	37	37	37	37	37	37
Gender	Pearson Correlatio n	-.394*	.394*	.345*	-.092	1	-.008	-.239	.054
	Sig. (2- tailed)	.056	.016	.036	.589		.960	.155	.750
	N	37	37	37	37	37	37	37	37
Experienc e attending online training	Pearson Correlatio n	-.004	-.004	.174	.287	-.008	1	-.172	-.328*
	Sig. (2- tailed)	.982	.982	.303	.085	.960		.308	.048
	N	37	37	37	37	37	37	37	37
Experienc e owning Business	Pearson Correlatio n	.045	.045	-.253	-.098	-.239	-.172	1	.232
	Sig. (2- tailed)	.789	.789	.131	.563	.155	.308		.167

	N	37	37	37	37	37	37	37	37
Online Training Motivation	Pearson Correlation	-	.125	-.052	-.270	.054	-.328*	.232	1
	Sig. (2-tailed)	.54	.462	.758	.107	.750	.048	.167	
	N	37	37	37	37	37	37	37	37

Table 2

ANOVA Results for Age Differences

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.850	7	1.264	.891	.526
Within Groups	41.131	29	1.418		
Total	49.981	36			

Furthermore, the results of independent sample t-test to determine significant difference of online training motivation between female and male in gender group are shown in Table 3a and Table 3b; in which, male was code as "1" and female was code as "2". Findings indicated an insignificant difference of online training motivation for male ($M = 8.4417$, $SD = 1.48045$) and female ($M = 8.5760$, $SD = 1.03533$) with the difference of $t(16.358) = -0.283$, $p = 0.781$ (two-way). The difference in mean scores was -0.13433 with 95% confidence interval for the difference between -1.13927 and 0.87060 . Hence, H_{02} (there is no significant difference of online training motivation scores between different genders of university students at 0.05 level of significance) failed to be rejected.

Table 3a

Group Statistics for Gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Online Training Motivation	Male	12	8.4417	1.48045	.42737
	Female	25	8.5760	1.03533	.20707

Table 3b

Independent Samples Test Results for Differences in Gender

		Levene's Test for Equality of Variances		t-test for Equality of Means				95% Confidence Interval of the Difference		
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Online Training Motivation	Equal variances assumed	.664	.421	-.321	35	.750	-.13433	.41906	-.98506	.71640
	Equal variances not assumed			-.283	16.358	.781	-.13433	.47489	-1.13927	.87060

Finding is consistent with previous researchers that found gender to have insignificant effect on training motivation in face-to-face training by Iqbal and Dastgeer (2017), and in online

training by Aziz et al. (2024). However, some researchers including Tharenou (2001) and Simmering et al. (2009) found that gender had a significant effect on training motivation among employees. This might be explained through a research by Bakry, Saleh and Nashaat (2022) that demonstrated females to be interested in learning but men only prefer to learn if they think they want to practice what they learned from training. Therefore, it is believed that both female and male participants in the current research were interested to learn and use what they learn in the online training; in which, there is no significant difference of online training motivation between genders among the university students.

On the other hand, Table 4 shows the results of one-way ANOVA to determine significant differences among race groups. Findings indicated that there is no significant difference between race groups as determined by one-way ANOVA [$F(3,33) = 0.385$, $p = 0.764$]. Hence, H_03 (there is no significant difference of online training motivation scores among different races of university students at 0.05 level of significance) failed to be rejected. Finding is inconsistent with previous research by Punksungka et al. (2022) that found race to affect training effectiveness among employees. However, finding is consistent with Aziz et al. (2024) that found race had no effect on training motivation among youths attending online training related to entrepreneurship.

It is believed that race might have insignificant effect on online training motivation because samples used in the current research were taken from Malaysia; in which, in Malaysia, different races including Malay, Chinese, Indian, and minority races are given similar and equal education that is controlled by the government, which is making the different races to have similar background. Research by Newton, Steele, Jaber and Pace (2024) demonstrated that cross-racial training was done in the U.S. because different races in the U.S., including the White, Black, Hispanic, and other minority races received different education. Hence, it can be seen that Punksungka et al. (2022) found race to affect training effectiveness because samples were taken in the U.S., but Aziz et al. (2024) found inconsistent findings because samples were taken in Malaysia. Hence, it can be concluded that race has no effect on online training motivation among Malaysian university students.

Table 4

ANOVA Results for Race Differences

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.692	3	.564	.385	.764
Within Groups	48.289	33	1.463		
Total	49.981	36			

Consistently, findings also indicated that there is no significant difference among religion groups as determined by one-way ANOVA [$F(3,33) = 0.111$, $p = 0.953$]; this is shown in Table 5. Hence, H_04 (there is no significant difference of online training motivation scores among different religions of university students at 0.05 level of significance) failed to be rejected. Similar to race, the background of Malaysian participants taken as samples is also the same; hence, it is believed that religion also has no significant effect on online training motivation because participants have similar backgrounds, such as equal education that is controlled by the government. Findings also consistent with research by Aziz et al. (2024) and inconsistent with research by Punksungka et al. (2022).

Table 5

ANOVA Results for Religion Differences

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.501	3	.167	.111	.953
Within Groups	49.480	33	1.499		
Total	49.981	36			

In addition, Table 6 shows the one-way ANOVA results to determine significant differences in online training motivation among different levels of family income. Findings indicated that there is no significant difference among different family income levels as determined by one-way ANOVA [$F(2,34) = 2.006$, $p = 0.150$]. Hence, H_{05} (there is no significant difference of online training motivation scores among different family's income levels of university students at 0.05 level of significance) failed to be rejected. Finding is inconsistent with previous research demonstrated by Tharenou (2001) but consistent with research finding by Aziz et al. (2024). It is believed that the inconsistent research finding is due to the type of samples taken in each research. For example, Tharenou (2001) used samples from Australian employees working with private and government organizations. However, Aziz et al. (2024) used samples from Malaysian youth; hence, finding is consistent with Aziz's et al. (2024) research because both used the same type of youth participants. Hence, it can be concluded that a family's income level is not a significant demographic variable affecting online training motivation among youth but it might have an effect on other types of participants.

Table 6

ANOVA Results for Family Income Differences

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.274	2	2.637	2.006	.150
Within Groups	44.707	34	1.315		
Total	49.981	36			

In addition, Table 7 shows the one-way ANOVA results to determine significant differences in online training motivation among different experiences of owning business. Findings indicated that there is no significant difference among different experiences of owning business as determined by one-way ANOVA [$F(2,34) = 0.992$, $p = 0.382$]. Hence, H_{06} (there is no significant difference of online training motivation scores among different experiences of owning business by university students at 0.05 level of significance) failed to be rejected. Finding is consistent with previous research by Iqbal and Dastgeer (2017) and Aziz et al. (2024) but inconsistent with research finding by Tharenou (2001) and Chen et al. (2006).

It is believed that the inconsistent research finding is due to the participants' excitement as a hindrance reason affecting participants' training motivation. This is explained by a research from Ganesh and Khatoon (2023); in which, their research found that employees' excitement to work affect their motivation to work, retain, and develop their career at their respective organizations. This demonstrates that, samples taken in research by Iqbal and Dastgeer (2017), Aziz et al. (2024), and the current research were excited to attend the training that finally increase their training motivation regardless their experience; in which, either they already have experience or not, participants still excited to attend the training.

Meanwhile, in research by Tharenou (2001), employees that have longer tenure or experience working at the organization have less excitement as compared to those that just

started working; hence, the experience differences affect their training motivation. Hence, it can be concluded that experience of owning business does not affect online training motivation among university students because it is believed that participants are excited to attend training regardless whether they already own business, used to own business, or never had business before.

Table 7

ANOVA Results for Experience Owning Business

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.754	2	1.377	.992	.381
Within Groups	47.227	34	1.389		
Total	49.981	36			

In addition, Table 8a and Table 8b show the results of independent sample t-test to determine significant difference of online training motivation between experience attending online training; in which, the participants' answer of "Yes" was code as "1" and "No" was code as "2". Findings indicated a significant difference of training effectiveness for "Yes" ($M = 8.7000$, $SD = 0.92484$) and "No" ($M = 7.6667$, $SD = 1.94696$) with the difference of $t(35) = 2.052$, $p = 0.048$ (two-way). The difference in mean scores was 1.03333 with 95% confidence interval for the difference between 0.01107 and 2.05559. Using a formula to determine effect size as suggested by Pallant (2020), the effect size was large (0.9152) indicating the importance of experience attending online training on online training motivation. Hence, H_07 (there is no significant difference of online training motivation scores between different experiences of attending online training among university students at 0.05 level of significance) is rejected. Finding is inconsistent with research findings related to online learning, such as those by Shukla et al. (2024), and Ahmed et al. (2025) that found computer literacy as an important demographic variable affecting the effectiveness of online learning; in which, these researches demonstrated the importance of online training experience. However, a study by Aziz et al. (2024) found that experience attending online training had no effect on training motivation in online training using samples among Malaysian youths. It is believed that the inconsistent finding is due to computer literacy differences among samples taken by these researchers; in which, the current research used samples from Malaysian university students but Aziz's et al. (2024) used samples from different participants.

According to Nassr, Aborujilah, Aldossary and Aldossary (2020), Malaysian university students experienced difficulty in using online learning since the sudden switch of face-to-face class to online class during pandemic COVID-19. This explained why participants of the current research that had no experience of attending online training had less online training motivation as compared to those that already had experience; in which, the university students might perceive that it will be difficult to use online learning as a training medium. Meanwhile, samples used by Aziz et al. (2024) were not specifically university students that had no idea about the difficulty of using online training; in which, regardless if they had or never had experience of attending online training will not affect their online training motivation.

Table 8a

Group Statistics for Experience Attending Online Training

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Online	Yes	31	8.7000	.92484	.16611
Training	No	6	7.6667	1.94696	.79484
Motivation					

Table 8b

Independent Samples Test Results for Differences in Experience Attending Online Training

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Online Training Motivation	Equal variances assumed	10.731	.002	2.052	35	.048	1.03333	.50355	.01107	2.05559
	Equal variances not assumed			1.273	5.445	.255	1.03333	.81202	-1.00379	3.07045

Research Implications, Limitations and Future Research

The current research found that experience of attending online training was a significant demographic variable affecting online training motivation among university students in Malaysia. However, other demographic variables including age, gender, race, religion, family income levels, and experience owning business were not significant demographic variables affecting online training motivation related to undergraduate entrepreneurship among these university students. Hence, research findings partially supported the Theory of Training Motivation by Colquitt et al. (2000) that later updated by Chung et al. (2022).

The current research also demonstrated a large effect of differences in experience attending online training to affect online training motivation among university students. As an implication, the Human Development (HD) or Human Resource Development (HRD) practitioners might want to consider offering training related to computer literacy among university students to improve their self-efficacy and increase their training motivation before intensively using online training as a medium of training delivery. Future research is suggested to use qualitative study or mixed methods to explain further how demographic variables can affect or cannot affect online training motivation. This is due to the limitation of the current research that was done using a quantitative approach, in which it cannot explain why there are inconsistent findings with previous research.

Conclusion

As a conclusion, the aim of this research was to determine the role of demographic variables on online training motivation. Hence a pre-experimental research design was used by organizing online training related to undergraduates' entrepreneurship among university students in a Malaysian university. Findings indicated that only experience attending online training was found to be significant demographic variable affecting online training motivation

among the university students. However, other demographic variables including age, gender, race, religion, family income levels, and experience owning business were not significant demographic variables affecting online training motivation. There are mixed research findings, in which some are consistent and some are inconsistent with previous research. Taken together, it is suggested for HD or HRD practitioners to offer more training related to computer literacy among university students to increase online training motivation and effectiveness; it is also suggested for future research to do similar study involving qualitative approach or mix-method using different types of sample.

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References

- Ahmed, M. M., Sultana, M., Rokonzaman, M., & Hossain, M. K. (2025). The nexus between teacher trainees' digital literacy and online learning motivation. *Asian Association of Open Universities Journal*, 20(1): 40-53.
- Andoh, R. P. K., Annan-Prah, E. C., Boampong, G. N., Jehu-Appiah, J., Korsah, A. M., & Owusu, E. A. (2024). Examination of the influence of transfer opportunity, assimilation of training content and motivation to transfer in the training transfer process. *European Journal of Training and Development*, 48(3/4): 281-297.
- Aziz, S. F. A. (2018a). *Keberkesanan latihan dan pembangunan sumber manusia*. Bangi, Selangor: Penerbit UKM.
- Aziz, S. F. A. (2018b). Redefining training motivation: Determining the booster effect of training motivation on training effectiveness using the Malaysian sample. *Indian Journal of Public Health Research & Development*, 9(12): 2642-2646.
- Aziz, S. F. A., Hussein, N., Husin, N. A., Ibrahim, M. A. (2022). Trainers' characteristics affecting online training effectiveness: A pre-experiment among students in a Malaysian secondary school. *Sustainability*, 14, 11047. <https://doi.org/10.3390/su141711047>
- Aziz, S. F. A., Rosly, M. Z., Omar, N. H., Selamat, M. N., & Mohd, R. H. (2024). Effect of online training motivation on online training effectiveness: A pre-experiment of Kickstart Business Program in Malaysia. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 14(4): 1160-1168.
- Aziz, S. F. A., & Selamat, M. N. (2018). Latihan dalam pembangunan dan pemeraksanaan komuniti. In N. Tambi, J. Manap & S. F. A. Aziz (Eds.), *Pemeraksanaan Komuniti di Malaysia*. Bangi, Selangor: Penerbit UKM.
- Bakry, H. E. S., Saleh, I. M. & Nashaat, I. H. (2022). Gender and training: a comparative study between the impact of undergoing training on male and female employees and the degree of their career growth. *المجلة العلمية للدراسات التجارية والبيئية*, 13(2):616-644.
- Chen, H. C., III, E. F. H., & Bates, R. A. (2006). Situational and demographic influences on transfer system characteristics in organizations. *Performance Improvement Quarterly*, 19(3): 7-25.
- Chung, S., Zhan, Y., Noe, R. A., & Jiang, K. (2022). Is it time to update and expand training motivation theory? A meta-analytic review of training motivation research in the 21st century. *Journal of Applied Psychology*, 107(7): 1150.

- Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology*, 85(5): 678-707.
- Estevez, A. G., Roche, J. R. F., Espinosa, A. H. R., & Rodríguez, D. L. (2018). Social skills training program to prevent alcohol consumption in university students. *International Journal of Health Sciences*, 2(3): 43-54.
- Ganesh, S., & Khatoon, G. (2023). Employee excitement if not spell bound a boon to employer. *Journal of Business and Environmental Management*, 2(2): 1-15.
- Iqbal, K., & Dastgeer, G. (2017). Impact of self-efficacy and retention on transfer of training: The mediating role of motivation to transfer. *Journal of Management Development*, 36(10), 1270-1282.
- Mofokeng, T. J., Amoa-Gyarteng, K., & Dhliwayo, S. (2025). Demographic influences on employee perceptions: Performance management, motivation, and career advancement. *Cogent Business & Management*, 12(1). <https://doi.org/10.1080/23311975.2025.2480242>
- Nassr, R. M., Aborujilah, A., Aldossary, D. A., & Aldossary, A. A. A. (2020). Understanding education difficulty during COVID-19 lockdown: Reports on Malaysian university students' experience. *IEEE access*, 8:186939-186950.
- Newton, C., Steele, J. M., Jaber, N., & Pace, A. (2024). The cross-racial training approach: A practical training framework. *Training and Education in Professional Psychology*. <https://dx.doi.org/10.1037/tep0000497>
- Pallant, J. (2020). *SPSS survival manual* (7 ed.). England: McGraw-Hill Education.
- Punksungka W., Yamashita T., Helsinger A., Karam R., Cummins P., Kramer J. (2022). Re-examining adult education and training participation by education, literacy, gender, and race/ethnicity in the U.S. *Journal of Adult and Continuing Education*, 28 (2): 634 - 657.
- Shukla, A., Dash, S., & Kumar, A. (2023). Factors affecting transfer of online training: A systematic literature review and proposed taxonomy. *Human Resource Development Quarterly*, 35(3): 363-390. <https://doi.org/10.1002/hrdq.21518>.
- Simmering, M. J., Posey, C., & Piccoli, G. (2009). Computer self-efficacy and motivation to learn in a self-directed online course. *Decision Sciences Journal of Innovative Education*, 7(1):99-121.
- Štrbac, D., Paunović, M., & Pavlović, D. (2024). The influence of demographic characteristics on the effectiveness of public administration training programs. *Stanovništvo*, 62(2): 251-266.
- Tharenou, P. (2001). The relationship of training motivation to participation in training and development. *Journal of Occupational and Organizational Psychology*, 74:599-621.