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Educators' Acceptance of Online Platforms for Personal and Professional Development during the COVID-19 Pandemic

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Abstract
With the pandemic, academic activities of education institutes such as teaching, learning, and assessment as well as programmes targeted for educators' personal and professional development have been transformed to online from physical mode. The use of online platforms has become an essential pedagogical tool. This study investigated educators' acceptance of online platforms for their personal and professional development during the COVID-19 pandemic in Sri Lanka. One hundred and ninety-nine responses were received for the survey, and data were analysed using statistical methods. The study found the importance of belief structures- attitudinal, normative and control beliefs, and attitude toward the behaviour, subjective norms, and perceived behavioural control in determining educators' acceptance of online platforms for their personal and professional development purposes. This paper concludes with a discussion on implications of the findings for theory and practice on educators' acceptance of new technologies for teaching and learning purposes.

Key Words: COVID-19, technology acceptance, intention, personal development, professional development

Introduction

Developing capacities of educators is essential for the success of educators themselves as well as for the survival and growth of economies and societies. Attending seminars, workshops, training sessions, degrees programmes, and higher degree programmes are some of personal and professional development programmes (PPDP) educators use for their capacity development. The COVID-19 pandemic has greatly affected teaching and learning endeavours worldwide. With the outbreak of COVID-19, most of the teaching and learning activities have been transformed to online mode from physical mode (Abumalloh et al. 2021; Espino-Díaz, Fernandez-Caminero, Hernandez-Lloret, Gonzalez-Gonzalez, & Alvarez-Castillo, 2020; Mikołajczyk, 2021; Selvaraj, Vishnu, Nithin, Benson, & Mathew, 2021; Vargo, Zhu, Benwell, & Yan, 2021). This is not an exception for PPDP targeted for educators during the COVID-19 pandemic.

The literature identifies an online platform as a digital service which allows uses to interact with the Internet to supply or obtain services electronically such as to sell

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products/services, obtain information, stay in touch with others, find jobs, and find accommodation (OECD, 2019). Accordingly, marketplaces (such as Amazon), search engines (such as Google), social media (such as LinkedIn), video-based communication (such as Zoom) and many other digital services come under the description of online platforms. With the COVID-19 pandemic, organizations and individuals eagerly searching for new platforms and ways to enhance regular routines while learning new technologies and solutions. When considering personal and professional development of educators', with the active engagement in PPDP they can succeed in their lives with self-satisfaction while supporting for organizational success. Hence, educators should continually search for avenues for personal and professional development and education institutes should encourage educators to engage in these. The way PPDP were conducted before the pandemic cannot be the same during the pandemic due to social distancing restrictions. Continued education while practicing social distancing, created an environment for virtual learning and teaching, and emerged innovative approaches with the use of digital services for online instruction. Consequently, the use of digital services in the education field, in general, has greatly increased worldwide with the COVID-19 pandemic. Several online platforms have become available for teaching and learning purposes during the pandemic (see Vargo et al., 2021 for review).

However, the availability of online platforms alone does not enhance educators' intention to engage in online platforms for PPDP. The conditions or environment created by the pandemic as well as the context of educators are also important. Some studies showed that both educators and students encounter many challenges in online learning (Amhag, Hellstrom, & Stigmar, 2019; Anshari, Alas, Yunus, Sabtu, & Hamid, 2016; Kebritchi, Lipschuetz, & Santiague, 2017; Obrad, 2020; Yu, Liu, Huang, & Cao, 2021). For example, Anshari et al. (2016) showed that both educators and students are under pressure when adjusting to online learning. Education institutes organized online sessions such as seminars and workshops to expand both educators' and students' technology-related capacities for teaching and learning purposes during the pandemic. These opportunities led both educators' and students' who were not much into technologies to adapt them and be motivated to use them for their academic purposes. However, all educators around the world have not received equal opportunities to enhance their technology-related capacities. According to Hayashi, Garcia, Maddawin and Hewagamage (2020), one in four educators did not receive any opportunity to enhance their capacities in online teaching and learning in Sri Lanka during the pandemic. Such situations may influence educators' low intention to use online platforms for PPDP. This shows the importance of understanding educators' intention to use online platforms for PPDP, especially during this pandemic. Therefore, it is questioned "what are the factors that influenced educators' acceptance of online platforms for PPDP during the COVID-19 pandemic". The main objective of the study is, therefore, to examine the factors affecting educators' acceptance of online platforms for PPDP

during the COVID-19 pandemic.

Concerning the importance of the study, first, the study will lead to identify the antecedents of educators' acceptance of online platforms for PPDP. Although few previous studies have investigated the acceptance of digital services for teaching and learning purposes (Ahmed & Ward, 2016; Kripanont, 2006; Sadaf, Newby, & Ertmer, 2012), significant gaps remain in the literature as there is a lack of research conducted during- and post-COVID-19 era. Hence, the findings of the present study will contribute to the literature on personal and professional development of educators. Second, the findings can enhance the understanding of education institutes that provide PPDP using online platforms on favourable conditions for the acceptance of online platforms. Third, findings are beneficial for policymakers on education and academic performance for their education strategy, policy, and procedure development. Finally, from the point of higher education institutes to which educators are attached to, support for the acceptance of online platforms for PPDP can ultimately lead to satisfied and capable educators employed in their institutions. This will strengthen opportunities of higher education institutions to attract more students while implementing different study programmes with the contribution of educators with greater experiences in online platforms for teaching and learning.

Literature Review

Personal and professional development

The literature differentiates between personal and professional development (Ahmed & Ward, 2016; Lee, 2004; Malm, 2009;). Personal development is the development of the whole person that gives the identity, which is achieved through self-exploration, investigation, understanding, and past experience (Tomlinson, 2004). In contrast, professional development involves occupational role development to be an expert in the chosen field (Tomlinson, 2004). Therefore, personal development is the development of skills in general for personal growth whereas professional development is the development of appropriate skills for an individual's job role and profession's advancement. For the study purposes, personal development and professional development are taken together since the purpose of the study was not to investigate or compare and contrast personal and professional development programmes available for educators but to investigate educators' acceptance of online platforms for their development.

Acceptance of online platforms for PPDP

User acceptance of new technologies is identified as an individual innovation and the main contributor for the actual behaviour, i.e., actual use of new technologies (Elias, Smith, & Barney, 2012). Behavioural intention is used in many studies to understand the user acceptance of different technologies since it is recognised as the best

predictor of individuals' tendencies to perform a certain behaviour (Davis, 1989; Fishbein & Ajzen, 1975; Joo and Choi, 2015; Lee, 2010; Rondan-Cataluña, Arenas-Gaitán, & Ramírez-Correa, 2015; Yoon, 2016). Therefore, behavioural intention is used in the present study to identify educators' acceptance of online platforms for PPD. In doing so, the study draws on the decomposed theory of planned behaviour (DTPB) (Taylor & Todd, 1995a, 1995b), the theory of reasoned action (Fishbein & Ajzen, 1975), the theory of planned behaviour (Ajzen, 1991), and technology acceptance model (Davis, 1989). Although DTPB had been widely used in prior research in different contexts to explain user acceptance of new technologies (such as Bidin, Md Hashim, Sharif, & Mohd Shamsudin, 2011; Gangwal & Bansal, 2016; Ramayah, Rouibah, Gopi, & Rangel, 2009; Sadaf et al., 2012; Shih & Fang, 2004; Tao & Fan, 2017), the present study is unique since it investigated educators' intention to use online platforms for PPDP during the COVID-19 pandemic. The model proposed in the study is shown in Figure 1.

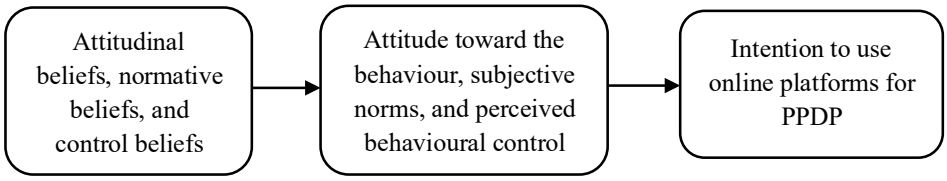

Figure 1. Educators' intention to use online platforms for PPDP

Individuals' behavioural intention is influenced by their attitude toward the behaviour, subjective norms, and perceived behavioural control (see Taylor & Todd, 1995a, 1995b for review). Attitude toward the behaviour is an individual's evaluation to perform a specific action; subjective norms are an individual's evaluation of how others would perceive if he or she perform a specific action; perceived behavioural control denotes an individual's evaluation of ease or difficulty of performing a specific action (Fishbein & Ajzen, 1975). Ajzen (2011) and Ahmed and Ward (2016) empirically supported positive associations between behavioural intention and attitude toward the behaviour, subjective norms, and perceived behavioural control. In the context of the present study, positive feelings toward the intention to use online platforms for PPDP could motivate educators to accept and engage with them. Introducing online platforms for PPDP to educators, facilitating the usage, and the provision of avenues to interact with peers could also influence educators' intention to use online platforms for PPDP.

Further, the literature supports that attitude toward the behaviour, subjective norms, and perceived behavioural control are influenced by individuals' belief structures, i.e., attitudinal, normative and control beliefs (see Taylor & Todd, 1995a, 1995b for review). Attitudinal beliefs involve perceptions toward usefulness and ease of use

of a system and the extent to which the system is consistent with his or her value system, needs, and experience. Normative beliefs are social influences, which make an individual to perform a specific action. According to Taylor and Todd (1995a, 1995b) and others such as Kalkan, Aksal, Gazi, Atasoy, and Dağlı (2020) and Santos and Gonçalves (2018), the main social influencers on an individual's behavioural actions are superiors and work colleagues. Control beliefs are non-volitional personal shortfalls and external barriers, which obstruct the performance of a specific action. Control beliefs involve with self-efficacy and conditions such as adequate time and resources that facilitate technology acceptance (for detailed review, Fishbein & Ajzen, 1975; Taylor & Todd, 1995a, 1995b). Accordingly, in the context of the present study, educators' perceptions on the ease of use and usefulness of online platforms for PPDP are important. Educators could be more likely to accept a system if it is compatible with their existing values, needs, and experience. Hence, perceived compatibility is important for educators to use online platforms for PPDP. Educators may also experience social influence at work form their peers and superiors. Higher education institutes should also facilitate educators by facilitating their development (Anshari et al., 2016; Kebritchi et al., 2017). In doing so, collaboration, interactivity, flexibility, and accessibility are identified as important in the context of online teaching and learning (Anshari et al., 2016).

Furthermore, the theory of reasoned action and theory of planned behaviour postulate direct relationships between individuals' attitudinal beliefs and attitude toward the behaviour, between individuals' normative beliefs and subjective norms, and between individuals' control beliefs and perceived behavioural control. However, previous research argued for and provided empirical evidence for crossover effects between these constructs (Oliver & Bearden, 1985; Ryan, 1982; Shimp & Kavas, 1984; Taylor & Todd, 1995a). For example, a direct relationship between individuals' normative beliefs and attitude toward the behaviour is empirically established in addition to the direct relationship between individuals' normative beliefs and subjective norms (Oliver & Bearden, 1985; Ryan, 1982;), which suggests social influences on attitude toward the behaviour. In addition, a direct relationship is established between individual's attitudinal beliefs and subjective norms (Shimp & Kavas, 1984; Oliver & Bearden, 1985), which suggests that most people are similar and hence, they may share common beliefs. Although the importance of examining such crossover effects have been emphasized (Taylor & Todd, 1995a), these crossover effects have not been sufficiently empirically examined in the recent studies (for example, Ahmed & Ward, 2016; Huh, Kim, & Law, 2009; Sadaf et al., 2012; Tao & Fan, 2017). Considering the above arguments, the present study tested for possible crossover effects between individuals' attitudinal, normative and control beliefs and attitude toward the behaviour, subjective norms, and perceived behavioural control in influencing their behavioural intention. This may lead to better understand possible crossover effects between the three belief

structures and attitude toward the behaviour, subjective norms, and perceived behavioural control, improve the explanatory power and provide variants to planned behaviour (refer to Taylor & Todd, 1995a for more). Hence, based on the literature reviewed above and the model shown in Figure 1, following mediation hypotheses are proposed:

H1: Attitude toward the behaviour, subjective norms, and perceived behavioural control mediate between attitudinal, normative and control beliefs and educators' intention to use online platforms for PPDP

H1a: Attitude toward the behaviour, subjective norms, and perceived behavioural control mediate between attitudinal beliefs and educators' intention to use online platforms for PPDP

H1b: Attitude toward the behaviour, subjective norms, and perceived behavioural control mediate between normative beliefs and educators' intention to use online platforms for PPDP

H1c: Attitude toward the behaviour, subjective norms, and perceived behavioural control mediate between control beliefs and educators' intention to use online platforms for PPDP

Methodology

The present study adopted a quantitative survey research design. The following sections describe the measures, sample, method of data collection and methods of data analysis used for the present study.

Measures

To achieve the purpose of the study, three measures were used to access 1) educators' attitude toward the behaviour, subjective norms, and perceived behavioural control, 2) educators' attitudinal beliefs, normative beliefs, and control beliefs; educators' intention to use online platforms for PPDP. The measures for the present study were inspired from several previous studies (such as Ahmed & Ward, 2016; Bidin et al., 2011; Gangwal & Bansal, 2016; Huh et al., 2009, Kripanont, 2006; Taylor & Todd, 1995a, 1995b). A nine-item measure was developed to assess educators' attitude toward the behaviour, subjective norms, and perceived behavioural control. An 18-item measure was developed to assess educators' attitudinal beliefs, normative beliefs, and control beliefs. A three-item measure for educators' intention to use online platforms for PPDP was adapted from Ahmed and Ward (2016) and Huh et al. (2009). All measurement scales were on a 7-point Likert scale ranging from strongly agree (7) to strongly disagree (1). Item measures were pre-tested before incorporating into the survey questionnaire. In addition to these main variables, data relating to respondents' age, sex, the highest level of education, job position, types of programmes attended and discipline of the educator, i.e., STEM or non-STEM were collected.

Sample and data collection

The target group of respondents were educators engaged in higher education institutes in Sri Lanka. The potential respondents and their contact details were identified using official web pages of higher education institutes in operation in the country. The sampling techniques adopted were snowball and convenience sampling considering the large number of educators in the country and the limitations of resources in conducting the study. The data were collected in mid-2021 using a survey questionnaire. The link to the survey was shared using the modes of email and professional networks. One hundred and ninety-nine (199) valid responses were received. Of the respondents, 60.8% were female while 39.2% were male. 54.8% were in senior academic positions while 45.2% were junior academic positions. 61.3% were teaching subjects related to STEM discipline. 73.9% had master's degrees (M.Phil./MBA/MSc/MA) while 26.1% had doctorates as the highest education qualification. The mean age of respondents was 37 years (minimum = 24, maximum = 70 years). In the year 2020, 75.9% reported attending professional development programmes (yes/no). Further, in the year 2020, 56.8% reported attending personal development programmes (yes/no).

Data analysis

The measures were tested with Cronbach's alpha for internal consistency reliability. The criterion adhered to was Cronbach's alpha reliability values should be higher than 0.7 for each factor extracted as well as for the total measure. To test the factor structure Principal component factor analysis was conducted. The criteria adhered to included eigenvalues should be 1.0 or above for all components, and factor loadings should be 0.5 or above. The measures were tested for convergent validity using average variance extracted, and for discriminant validity using the square root of average variance extracted. In addition, the measures were tested for construct reliability. The criterion adhered to was values for these indices should be 0.5 or above. The results of these tests were shown in Tables 1 to 4.

As shown in Table 1, the factor analysis for educators' attitudinal beliefs, normative beliefs, and control beliefs yielded three factors. These were identified as attitudinal beliefs, normative beliefs, and control beliefs. The items loaded for attitudinal beliefs represented online platforms' usefulness for academic productivity and academic and professional goals, ease of use, and compatibility. The items loaded for normative beliefs represented social influence. The items loaded for control beliefs represented controllable factors such as the availability of facilities and resources. Fit measures of average variance extracted, and construct reliability are also shown in Table 1. The total measure explained 68% (68.060) of the variance.

Table 1.
Factor analysis - Educators' attitudinal beliefs, normative beliefs, and control beliefs

Item	Attitudinal beliefs	Normative beliefs	Control beliefs
Using online platforms for PPDP would make it easy for me to achieve my academic and professional goals	.844		
Using online platforms for PPDP is compatible with my knowledge domain	.836		
I believe that using online platforms for PPDP would enhance my skills related to my job	.813		
Using online platforms for PPDP would increase my academic productivity	.809		
Using online platforms for PPDP fits well with requirements of my development	.789		
Using online platforms for PPDP helps my work-life balance	.716		
I feel comfortable using online platforms on my own for PPDP	.605		
My colleagues share their experiences on online platforms for PPDP		.862	
My colleagues are using online platforms for PPDP to enhance their performance		.823	
My organization recommends different online platforms for PPDP		.809	
My colleagues recommend useful online platforms for PPDP for me to attend		.799	
Using online platforms for PPDP is required for my next promotion		.626	
My organization supports use of online platforms for PPDP		.608	
The equipment (computer hardware, software and communication network) is available for me to engage in online platforms for PPDP			.765
The resources (guides, time, and support) are available for me to engage in online platforms for PPDP			.741
Online platforms available for PPDP are user friendly			.719
I can use online platforms for PPDP even I do not have any assistance			.681
There is no gap between my existing skills and skills required for engaging in online platforms for PPDP			.583
Eigenvalue	8.760	2.097	1.393
% of Variance	27.337	22.807	17.916
Average variance extracted	.604	.580	.500
Construct reliability	.91	.89	.83

As shown in Table 2, the factor analysis for educators' attitude toward the behaviour, subjective norms, and perceived behavioural control yielded three factors. These were identified as attitude toward the behaviour, subjective norms, and perceived behavioural control. Attitude toward the behaviour is represented with items such as satisfaction with online platforms and attitude toward online platforms. Subjective

norms are represented with items such as peer opinion. Perceived behavioural control is represented with items such as confident and ability to use online platforms. The measures of fit of mean variance and construct reliability are also shown in Table 2. The total measure explained 78% (77.999) of the variance.

Table 2.

Factor analysis - Educators' attitude toward the behaviour, subjective norms, and perceived behavioural control

Item	Attitude toward the behaviour	Subjective norms	Perceived behavioural control
It is a good idea to use online platforms for PPDP for my development	.897		
I have a favourable attitude toward using online platforms for PPDP	.882		
I am satisfied with using online platforms for PPDP	.879		
The encouragement of my colleagues to use online platforms for PPDP is important to me		.903	
The encouragement from my organization to use online platforms for PPDP is important to me		.850	
My family members and friends think that I should use online platforms for PPDP for my development		.642	
Decision of using online platforms for PPDP is entirely within my control			.820
I am confident that I can successfully engaged in online platforms for PPDP			.799
I am able to use online platforms for PPDP			.611
Eigenvalue	4.790	1.196	1.034
% of Variance	32.157	24.513	21.330
Average variance extracted	.790	.650	.561
Construct reliability	.92	.85	.79

As shown in Table 3, the factor analysis for educators' intention to use online platforms for PPDP yielded a single factor. The items represented intentions for future use and application. The measures of fit of mean variance and construct reliability are also shown in Table 3. The total measure explained 89% (89.080) of the variance. Table 4 shows correlations and the square root of average variance extracted for discriminant validity.

Table 3.

Factor analysis - Educators' intention to use online platforms for PPDP

Item	Intention to use
I intend to use online platforms for PPDP in the future	.954
I continue to use online platforms for PPDP for my development	.947
I intend to use learned capabilities through online platforms for PPDP in performing my job tasks	.930
Eigenvalue	2.672
% of Variance	89.080
Average variance extracted	.891
Construct reliability	.96

Table 4.

Correlation between study variables and square root of average variance extracted

		1	2	3	4	5	6	7	8	9	10	11	12
1	Age	-											
2	Dis.	.045	-										
3	JP	.025	.038	-									
4	EQ	.385**	.120	.011	-								
5	Sex	-.264**	-.088	.150*	-.132	-							
6	AB	-.128	.043	-.031	-.024	.034	*.78*						
7	NB	-.134	-.039	-.123	-.171*	.051	.558**	*.76*					
8	CB	-.158*	.056	-.044	.000	-.061	.678**	.497**	*.71*				
9	ATB	-.062	.043	.003	-.023	.017	.855**	.493**	.662**	*.89*			
10	SN	-.107	-.082	-.077	-.137	.037	.607**	.757**	.546**	.539**	*.81*		
11	PBC	-.045	.144*	.036	-.057	-.014	.584**	.420**	.705**	.554**	.489**	*.75*	
12	Int.	-.111	.018	.071	-.110	.017	.743**	.452**	.618**	.696**	.561**	.628**	*.94*

Dis. = Discipline (STEM/Non-STEM), JP = Job position, EQ = Highest education qualification, AB = Attitudi beliefs, NB = Normative beliefs, CB = Control beliefs, ATB = Attitude toward the behaviour, SN = Subjective Norr PBC = Perceived Behavioural Control, Int. = intention. Diagonal entries are square root of average variance extract $^{*}p < 0.05$, $^{**}p < 0.01$ (2-tailed)

The model was tested with SPSS Process macro of Hayes (2013). 5000 bootstrapped samples at bias-corrected 95% confidence intervals were used to evaluate the size and significance of indirect effects. Three models were specified for the analysis. Model 1 tested the relationships of attitudinal beliefs through mediators to intention; model 2 tested the relationships of normative beliefs through mediators to intention; model 3 tested the relationships of control beliefs through mediators to intention. The study followed the procedure stipulated by Hayes (2013) for testing mediator hypotheses. In doing so, the effect of each independent variable (X) on each mediator variable (M) was tested (i.e., X on M for *path a*); the effect of each independent variable and each mediator variable on the dependent variable (Y) was tested (X and M on Y for both *path a* and *path b*).

Findings

Tables 5, 6 and 7 show the results of regression analysis using Process (Hayes, 2013) for models 1, 2 and 3 mentioned above, respectively. Concerning model 1, the results shown in Table 5 suggest that attitudinal beliefs significantly influence attitude toward the behaviour (B = .979, $p < 0.001$), subjective norms (B = .691, $p < 0.001$), and perceived behavioural control (B = .512, $p < 0.001$). This fulfils one of the conditions for mediation, i.e., *path a*. Regression analysis was conducted with attitudinal beliefs and the three mediators (attitude toward the behaviour, subjective norms, and perceived behavioural control) predicting intention to use online platforms in support of H1a. The results for the effect of attitudinal beliefs on intention is statistically significant (B = .533, $p < 0.001$). Further, the results for effects of mediators on intention when controlling for attitudinal beliefs suggest that the effect of perceived behavioural control is statistically significant (B = .317, $p < 0.001$). These results show that both *path b* involving perceived behavioural control and *path c*' are statistically significant. In other words, both attitudinal beliefs and perceived behavioural control significantly predict intention. Therefore, the results shown in Table 5 suggest a partial mediation of perceived behavioural control between attitudinal beliefs and educators' intention to use online platforms for PPDP (indirect effect or *a*b* = .1624, where *path a* = .5119, *path b* = .3172). This partially supports H1a. The mediator, perceived behavioural control, accounts for approximately 23% of the total effect on intention (where direct effect = .5327, indirect effect = .1624, indirect effect/total effect = .2336).

Table 5.

Attitudinal beliefs through mediators to intention

X on M:	Attitude toward the behaviour	Subjective norms	Perceived behavioural control
Attitudinal beliefs	.9790***	.6914***	.5119***
R-sq	.7765***	.3687***	.3415***
LLCI	.9052	.5643	.4120
ULCI	1.0528	.8185	.6118
X and M on Y:	Intention	LLCI	ULCI
Attitudinal beliefs	.5327***	.3294	.7360
Attitude toward the behaviour	.0069	-.1797	.1658
Subjective norms	.1045	.0031	.2060
Perceived behavioural control	.3172***	.1868	.4477
R-sq	.6169***	-	-
Bootstrapped indirect effects of X on Y through M:	Effect	BootLLCI	BootULCI
Attitude toward the behaviour	.0068	-.2337	.2202
Subjective norms	.0723	-.0250	.1969
Perceived behavioural control	.1624	.0669	.2966

X = Independent variable, M = Mediator, Y = Dependent variable; LL = Lower Limit; UL = Upper Limit, CI Confidence Interval; Unstandardized regression coefficients are reported; Bootstrap sample size = 5000; 95 confidence interval; ***$p < 0.001$.

Concerning model 2, the results shown in Table 6 suggest that normative beliefs significantly influence attitude toward the behaviour (B = .587, p < 0.001), subjective norms (B = .868, p < 0.001), and perceived behavioural control (B = .371, p < 0.001). This fulfils one of the conditions for mediation, i.e., path a. Regression analysis was conducted with normative beliefs and the three mediators predicting intention to use online platforms in support of H1b. The results for the effect of normative beliefs on intention is not statistically significant (B = .082, p > 0.05). Further, the results for effects of mediators on intention when controlling for normative beliefs suggest that effects of all three mediators are statistically significant (attitude toward the behaviour: B = .364, p < 0.001; subjective norms: B = .231, p < 0.001; perceived behavioural control: B = .364, p < 0.001). In other words, the results show that path b for all three mediators are statistically significant while path c' is not statistically significant. Therefore, the results shown in Table 6 suggest complete mediation of attitude toward the behaviour (indirect effect = .2134), subjective norms (indirect effect = .2004), and perceived behavioural control (indirect effect = .1349) between normative beliefs and educators' intention. This supports H1b. The three mediators account for approximately 87% of the total effect on intention (where direct effect = .0820, total indirect effect = .5487, total indirect effect/total effect = .8699).

Table 6.

Normative beliefs through mediators to intention

X on M:	Attitude toward the behaviour	Subjective norms	Perceived behavioural control
Normative beliefs	.5869***	.8684***	.3710***
R-sq	.2747***	.5727***	.1766***
LLCI	.4529	.7630	.2585
ULCI	.7209	.9738	.4836
X and M on Y:	Intention	LLCI	ULCI
Normative beliefs	.0820	.0685	.2326
Attitude toward the behaviour	.3635***	.2492	.4779
Subjective norms	.2307***	.0954	.3661
Perceived behavioural control	.3636***	.2262	.5011
R-sq	.5667***	-	-
Bootstrapped indirect effects of X on Y through M:	Effect	BootLLCI	BootULCI
Attitude toward the behaviour	.2134	.0909	.3293
Subjective norms	.2004	.0550	.3758
Perceived behavioural control	.1349	.0585	.2336

X = Independent variable, M = Mediator, Y = Dependent variable; LL = Lower Limit; UL = Upper Limit, C Confidence Interval; Unstandardized regression coefficients are reported; Bootstrap sample size = 5000; 9 confidence interval; ***p < 0.001.

Concerning model 3, the results shown in Table 7 suggest that control beliefs

significantly influence attitude toward the behaviour (B = .904, p < 0.001), subjective norms (B = .762, p < 0.001), and perceived behavioural control (B = .839, p < 0.001). This fulfils one of the conditions for mediation, i.e., path a. Regression analysis was conducted with control beliefs and the three mediators predicting intention to use online platforms for PPDP in support of H1c. The results for the effect of control beliefs on intention is not statistically significant (B = .0382, p > 0.05). Further, the results for effects of mediators on intention when controlling for control beliefs suggest that effects of all three mediators are statistically significant (attitude toward the behaviour: B = .344, p < 0.001; subjective norms: B = .180, p < 0.001; perceived behavioural control: B = .343, p < 0.001). In other words, the results show that path b for all three mediators are statistically significant while path c' is not statistically significant. Therefore, the results shown in Table 7 suggest complete mediation of attitude toward the behaviour (indirect effect = .3105), subjective norms (indirect effect = .1369), and perceived behavioural control (indirect effect = .2879) between control beliefs and educators' intention. This supports for H1c. The three mediators accounts for approximately 95% of the total effect on intention (where direct effect = .0382, total indirect effect = .7353, total indirect effect/total effect = .9506).

Table 7.
Control beliefs through mediators to intention

X on M:	Attitude toward the behaviour	Subjective norms	Perceived behavioural control
Control beliefs	.9039***	.7622***	.8387***
R-sq	.4488***	.3038***	.6215***
LLCI	.7631	.6001	.7467
ULCI	1.0446	.9243	.9306
X and M on Y:	Intention	LLCI	ULCI
Control beliefs	.0382	-.1753	.2516
Attitude toward the behaviour	.3436***	.2227	.4644
Subjective norms	.1796***	.0745	.2846
Perceived behavioural control	.3433***	.1643	.5222
R-sq	.5644***	-	-
Bootstrapped indirect effects of X on Y through M:	Effect	BootLLCI	BootULCI
Attitude toward the behaviour	.3105	.1272	.4916
Subjective norms	.1369	.0237	.2754
Perceived behavioural control	.2879	.0658	.5362

X = Independent variable, M = Mediator, Y = Dependent variable; LL = Lower Limit; UL = Upper Limit, C
Confidence Interval; Unstandardized regression coefficients are reported; Bootstrap sample size = 5000; 9
confidence interval; ***$p < 0.001$

Discussion and Implications

The present study investigated the acceptance of online platforms for PPDP by university educators during the COVID-19 pandemic in Sri Lanka. Drawing on theories of planed behaviour, the study tested possible crossover effects to understand whether belief structures- attitudinal, normative and control beliefs, influence attitude toward the behaviour, subjective norms, and perceived behavioural control, and in turn predict educators' intention to use online platforms for PPDP. Three models have been tested to support the hypotheses. The results of statistical analysis are presented in Tables 5, 6 and 7 and discussed in the section on results.

First, the present study found that normative beliefs together with subjective norms predict educators' intention, i.e., subjective norms operate as a mediator between normative beliefs and educators' intention. This finding shows the importance of normative beliefs that involve social influence together with attitude toward the behaviour and subjective norms in making significant effect on educators' intention to use online platforms. Therefore, higher education institutions to which educators are attached to can use superior influence and peer influence to enhance normative beliefs with the aim of making an influence on educators' intention to use online platforms for their development purposes.

Second, the present study found that control beliefs together with perceived behavioural control predict educators' intention, i.e., perceived behavioural control operates as a mediator between control beliefs and educators' intention. This finding supports the arguments of Taylor and Todd (1995a, 1995b) on the same, as reviewed in the section on literature review. This finding shows the importance of control beliefs that involve controllable factors such as the availability of facilities and resources together with perceived behavioural control in making significant effect on educators' intention to use online platforms. Therefore, higher education institutions to which educators are attached to should make sure that appropriate facilities and resources are available for educators to use online platforms, which are significant in predicting educators' intention to use online platforms for their development purposes.

Third, the present study found the importance of attitudinal beliefs that involve online platforms' usefulness for academic productivity and academic and professional goals, ease of use, and compatibility in making significant effect on educators' intention. Further, the findings showed the importance of attitudinal beliefs together with perceived behavioural control in making significant effect on educators' intention to use online platforms. These findings suggest the importance of educators' perceptions toward usefulness and ease of use of online platforms and the extent to which online platforms are consistent with his or her value system, needs, and experience. These are important considerations for the developers of PPDP for educators using online platforms. However, the results of the present study do not support attitude toward the behaviour as a mediator between attitudinal beliefs and educators' intention. Similar

findings were reported by Shih and Fang (2004).

When above three (first, second, and thrid) are taken together, the present study found evidence to explain how educators' beliefs can affect the intention to use online platforms for PPDP. This is important because educators have been experiencing changes in working conditions, adapting to new teaching tools, and managing new ways of work engagements while confined to the pandemic.

Fourth, the present study found several crossover effects involving belief structures and attitude toward the behaviour, subjective norms, and perceived behavioural control in predicting educators' intention. When model 1 is taken into consideration, attitudinal beliefs together with subjective norms predict educators' intention; attitudinal beliefs together with perceived behavioural control predict educators' intention. When model 2 is taken into consideration, normative beliefs together with attitude toward the behaviour predict educators' intention; normative beliefs together with subjective norms predict educators' intention; normative beliefs together with perceived behavioural control predict educators' intention. When model 3 is taken into consideration, control beliefs together with attitude toward the behaviour predict educators' intention; control beliefs together with subjective norms predict educators' intention; control beliefs together with perceived behavioural control predict educators' intention. These findings of the present study are in line with contentions of Ryan (1982), Oliver and Bearden (1985), Shimp and Kavas (1984), and Taylor and Todd (1995a) for possible crossover effects of belief structures and attitude toward the behaviour, subjective norms, and perceived behavioural control in predicting behavioural intention. The findings of the present study contribute to the literature since recent research such as Huh et al. (2009), Sadaf et al. (2012), Ahmed and Ward (2016), and Tao and Fan, (2017) had not tested for these crossover effects when investigating behavioural intention.

Finally, although the study was conducted during the COVID-19 pandemic, the findings are of value for the post-COVID-19 pandemic era. Online platform creators, education institutes and educators have already invested their time, energy and resources for online teaching and learning platforms. Hence, the use of online platforms for teaching and learning purposes will flourish for the foreseeable future. In this context, more understanding on antecedents that influence the acceptance of online platforms for teaching and learning purposes adds value to the existing literature.

Conclusion

The study investigated the acceptance of online platforms for personal and professional development by university educators during the COVID-19 pandemic in Sri Lanka. One hundred and ninety-nine responses were received for the survey, and data were analysed using statistical methods. The study found the importance of belief structures- attitudinal, normative and control beliefs, and attitude toward the behaviour,

subjective norms, and perceived behavioural control in determining educators' acceptance of online platforms for their personal and professional development purposes. Specifically, the study found that subjective norms operate as a mediator between normative beliefs and educators' intention to use online platforms. Perceived behavioural control is also identified as a mediator between control beliefs and educators' intention to use online platforms. In addition, several crossover effects were identified involving belief structures and attitude toward the behaviour, subjective norms, and perceived behavioural control in predicting educators' intention to use online platforms. As discussed above, the findings have important implications for theory and practice on educators' acceptance of new technologies for teaching and learning purposes.

Limitations of the Study and Future Research

There are few limitations in the study, which will also open avenues for future research. First, the sample of the study is pooled using convenience and snowball sampling methods due non-availability of central database to access educators engaged in higher education institutes. The predictive accuracy of the findings can be increased if future research could pool samples using probability sampling methods. Second, the number of responses received for the survey were small. i.e., 199 valid responses. This impacted on the selection of methods for data analysis. Future research with large samples could test all the paths including crossover effects with a single model using structural equation modelling technique. Third, the study did not make a differentiation between the type of development programmes attended by educators, i.e., personal development versus professional development. Hence, future research could investigate and compare types of online platforms used by educators for these two development purposes. Finally, correlations between variables suggest significant associations between age of the respondents and control beliefs, the highest education qualification of respondents and normative beliefs, and study discipline of educators, i.e., STEM versus non-STEM, and perceived behavioural control. However, the present study has not incorporated demographic characteristics of respondents as moderators due the limitation of sample size. Future research could incorporate demographic characteristics of respondents as moderators.

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