

# Factors Influencing Secondary School Teachers' Beliefs and Intention to Accept Online Professional Development: An Empirical Study in Mauritius

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Received December 10, 2020; Revised February 6, 2021; Accepted March 12, 2021

## Cite This Paper in the following Citation Styles

(a): [1] Jianey Flore, Irene Govender, "Factors Influencing Secondary School Teachers' Beliefs and Intention to Accept Online Professional Development: An Empirical Study in Mauritius," *Universal Journal of Educational Research*, Vol. 9, No. 4, pp. 880 - 890, 2021. DOI: 10.13189/ujer.2021.090422.

(b): Jianey Flore, Irene Govender (2021). *Factors Influencing Secondary School Teachers' Beliefs and Intention to Accept Online Professional Development: An Empirical Study in Mauritius*. *Universal Journal of Educational Research*, 9(4), 880 - 890. DOI: 10.13189/ujer.2021.090422.

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**Abstract** Online professional development (OPD) for teachers has become an imperative in the face of the current and post covid-19 pandemic. The current traditional face-to-face professional development (PD) programme is no longer a viable option. While there is substantial research undertaken on online learning in general, there has been few on OPD and no known empirical research in the Mauritian context. The purpose of this explanatory study was to investigate teachers' perceptions of online professional development and the extent to which they believe it expands their knowledge and skills and improve student learning. A conceptual framework underpinned by the Unified Theory of Acceptance and Use of Technology and model of teacher learning was used as a lens in this research. The research was based on a case study of two schools in Mauritius. A focus group study was used to gather data qualitatively. The study involved three focus groups of five participants each. Using thematic analysis, the results show that face-to-face PD does not satisfy teachers' needs as it is too theoretical and offered in one-size-fits-all modes. Four predictors, teachers' experience with PD, performance expectancy, effort expectancy and facilitating conditions for the use of online teacher professional development programmes are proposed. Implications for practice are provided. This study should, therefore, be of value to practitioners wishing to develop online OPD programmes.

**Keywords** Online Professional Development, Secondary Teachers' Beliefs, Performance Expectancy, Facilitating Conditions

## 1. Introduction and Background

Professional development (PD) for teachers is one of the major aspects of educational reform. Therefore, the need for effective PD for teachers cannot be over-stated. In Mauritius, teachers' professional development is delivered largely in a face-to-face mode – a method that dominated the field of teacher education [1] until recently. Attendances at these programmes were poor for two main reasons – tiredness, and inconveniently located programmes away from schools. McConnell [2] has shown that this mode of delivery is ineffective. Yet, teacher professional development continues in the traditional face-to-face mode. To allay this ineffectiveness, the study proposes online professional development (OPD) as an alternative. While online learning is gaining popularity in higher education, and there is evidence to suggest that learners and professional development providers preferred online learning compared to face-to-face learning, there is a lack of theoretical frameworks to guide and assess the development of an online learning environment for professional development. Therefore, teachers may

hesitate to engage in online learning due to lack of confidence [3].

As online teacher professional development (OTPD) is still in a developing stage [4], there is limited research regarding the driving factors for teachers to be successful in OTPD [5]. In their seminal work, Fishbein and Ajzen [6] describe the importance of belief as a determinant in the intention to affect behaviour. This study highlights the importance of teachers' beliefs about OPD as they engage or intend to engage in the online learning environment. The research is guided by the following critical questions:

- (1) What are secondary school teachers' beliefs about OPD?
- (2) How are secondary school teachers' beliefs about OPD constructed or enabled to accept OPD?

To answer these questions, the remainder of the paper is organized as follows: Section 2 examines some of the relevant literature. Section 3 describes the conceptual framework for the study. Section 4 explains the research design, expanding on the data and methodology. Section 5 discusses the findings of the analysis. Section 6 concludes, highlighting possibilities for future research.

## 2. Literature Review

Teacher Professional development (TPD) has moved from a traditional lecture style (teacher-centred), to a more constructivist (student-centred) learning approach [7]. The success of an educational system, to some extent, is dependent on TPD programmes that are effective and relevant to teachers' needs [8]. Therefore, professional development must be holistic and relevant as teachers are accountable to many stakeholders [9]. As teachers move towards online resources, online PD programmes are becoming a viable option. Hence, the need to study teachers' beliefs about OPD programmes has become crucial as what teachers think and do is an expression of their beliefs [10].

### 2.1. Secondary Teachers' Beliefs about Professional Development

Teachers hold an array of beliefs concerning different areas such as their work, their students, their subject matter, their roles and responsibilities [11], and their beliefs about learning to teach. As regards belief theory, Phipps [10] argued that adults' beliefs influence their work and learning. In Pajares's [12] formative work on belief, he affirmed, "Beliefs are the best indicators of the decisions individuals make throughout their lives" (p. 307). He further highlighted that teachers' beliefs affect their planning, instructional decisions, and classroom practices, and therefore are even more significant than the teachers' knowledge. Following this assertion, Rosenfeld and Rosenfeld [13] found that teachers' beliefs about student

learning and PD increased. Hence, teachers' engagement relates to teachers' beliefs.

In their review of professional development, Hawley and Valli [14] list some factors that contribute to effective professional development. These factors are engaging teachers in collaborative problem solving; being continuous, supportive, information-rich; and helping teachers develop a theoretical understanding of the elements involved in the change or reform. They reiterated that schools must encourage teachers to share best practices and challenges from their classroom experiences to form a community of practice. These communities of practice can happen online and offer valuable support for new teachers coming into the profession. Therefore, to promote this sharing among teachers, Boelens, De Wever and Voet [15] proposed that transactional distance be reduced to facilitate social interaction, which begs the question, what better way is there than to transact online?

### 2.2. Technology and Professional Development

Teaching digital natives of the 21st century requires that teachers not only have content knowledge and pedagogical content knowledge, but also technological pedagogical content knowledge (TPCK) [16]. Therefore, the need for ongoing professional development cannot be overstated. OPD can be an effective way to improve teachers' technological skills. However, such programmes need to be constantly innovated and evaluated. OPD is offered in a needs-driven mode [17], so that users can access resources such as videos, tutorials, [1], self-paced online courses, critical friend group technique [18], online forums, and online synchronous discussions. In a recent study, Boelens, De Wever, and Voet [15] indicated that learning can happen in a blended mode, where the design environment should be able to: (1) incorporate flexibility; (2) encourage interaction; (3) help students' learning processes; and (4) nurture an effective learning environment. Blended learning provides several new opportunities to boost teaching and learning that includes increasing learners' flexibility [19]. Hence, it is considered a more effective pedagogy [20] than the traditional face-to-face mode and is cost-effective. The learners control their learning in terms of time, place, path, or pace more effectively; learners can determine the order of accessing the content provided online [21]. Hence educators have the option of selecting the most appropriate mode of learning; it can be face-to-face and/or online learning. Moreover, in an earlier study, Oleson and Hora [22] recognised that the way teachers teach is influenced by their experiences, personalities and characteristics. Online learning has the capability to integrate different learning styles that can benefit learners.

Compared to traditional face-to-face PD, OPD provides just-in-time assistance at teachers' workplaces irrespective of their location and time [23]. In this way Brooks and

Gibson [24] claim that learning can be personalised, practice-focused and community-based. In a more recent study, Albers et al. [25] affirm that teachers can reflect on critical issues thus creating communities of practice as support for themselves. The sharing of ideas and critical thinking within communities of practice can influence teachers' practices and hence develop confidence in their own ability [26]. It is likely that an increase in belief in future OPD programmes will occur.

### 2.3. Teachers' Beliefs and OPD

Although, Pajares [12] mentioned that beliefs are the best indicators for decision making, teachers choose online learning based on the any-time, any-place traits and availability. Attack [27] found that the benefits of convenience and flexibility offered in OPD are dependent on the ability of the participant to develop self-learning habits. A change in teachers' beliefs is required for them to follow OPD programmes and benefit from these programmes. Education reform will only be possible when teachers are ready to alter their traditional practices and develop new constructivist teaching strategies. Their readiness is related to their beliefs about their actual practices and teaching strategies.

Another determinant to enable change relates to teachers' PD self-efficacy. Self-efficacy is the capacity to anticipate difficulty and the belief about the ability to complete a task [28]. Such beliefs improve human accomplishment and personal well-being, hence fostering intrinsic interest [29]. Therefore, teachers' self-efficacy, a key factor, should be able to sustain the perseverance needed to be successful in OPD programmes. Ermeling [30] conceded that many experienced teachers also have difficulties with new instructional techniques. If teachers have high self-efficacy beliefs, they can adopt an efficacious behaviour towards OPD, thereby promoting progress in their professions, as teachers' self-efficacy determines their behaviour. In an earlier study, Lim [31] found that a major predictor for online learners' fulfilment and their intention to engage in online courses was self-efficacy. Lim's opinion was later confirmed by McGhee [32]. Teachers believe that they need computer skills for effective implementation of OPD [33].

A further belief that influences teachers' work is pedagogical belief. "Teachers' understandings, assumptions or propositions about teaching and learning constitute pedagogical beliefs" [34, p. 3]. Therefore, these beliefs play an important role in teachers' pedagogical decisions concerning how and whether to use technology in their classroom practices [35]. According to Ertmer, Ottenbreit-Leftwich, and Tondeur [36], teachers choose technological applications based upon their experience and competence in other curriculum and approaches, that is, teaching strategies aligned with their present beliefs about what is "good" education. Therefore, concrete experience

in a supportive environment may be a way of changing pedagogical beliefs. Teachers are at the centre of their own development as they reflect on their existing practices and find areas for improvement. Yet, many teachers' have long-standing pedagogical beliefs that can be resistant to change as teachers' pedagogical beliefs are largely shaped by their experiences as pupils in classrooms [37]. In their study, Rienties, Brouwer, and Lygo-Baker [38] affirmed that research to date has not been able to establish the profiles of participants who successfully completed OPD programmes.

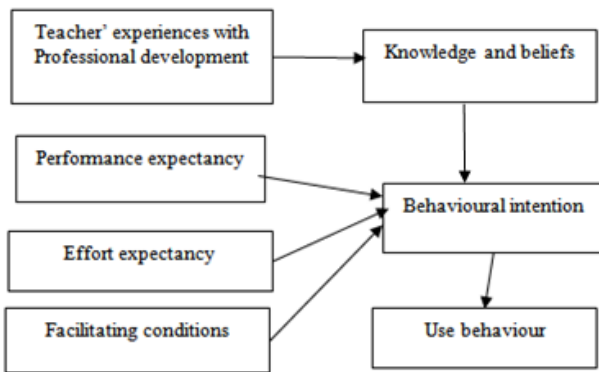
## 3. Conceptual Framework

The Unified Theory of Acceptance and Use of Technology (UTAUT), Venkatesh et al. [39] identifies the key factors that influence the behavioural intention of acceptance to use a system and the actual usage of the system. The constructs of UTAUT, performance expectancy, effort expectancy, and facilitating conditions explain teachers' intentions to use online teacher PD. Performance expectancy refers to the degree to which one believes that using the system will benefit one in performing one's job. Effort expectancy refers to the degree of ease associated with the use of the system. Facilitating conditions are defined as the degree to which an individual believes that an organisational and technical infrastructure exists to support the use of the system [39]. In another milestone study, Ajzen et al. [40] declared that beliefs influence behaviours. In a more recent study, Ng, Nicholas & Williams [41] affirmed that teachers' beliefs are reflected by certain behaviours as beliefs affect teachers' practices and decision-making. They claimed that a change in teachers' beliefs affect teachers' behaviour. Thus, the behavioural intention to use and actual usage of the technology by teachers is influenced by their beliefs.

In Guskey's [41] model, it was proposed that student learning outcomes bring about changes in teachers' beliefs, knowledge and attitudes, resulting in changing classroom practices. Fishman et al. [43] maintained that teacher professional development should be about teacher learning: changes in knowledge, beliefs, and attitudes that lead to the acquisition of new skills, new concepts, and new processes related to the teaching profession. It has also been noted that teacher learning in professional development is difficult to measure. If PD is embedded into teachers' daily practice, it is more likely to impact teachers' beliefs [44]. Thus, teachers' beliefs about OPD might change if their knowledge acquired during OPD has an impact on their classroom practices. In this study, the teacher learning model [45] was used as a lens to explore how the content, strategies, site and media influenced teachers' beliefs about OPD in a learning context as these beliefs may influence their classroom practices, knowledge and the way they will learn the content. Teachers' experiences with OPD will

shape their knowledge and beliefs. Vo & Nguyen [18] attest that successful teacher PD is an important predictor for the best student outcomes. Change in a teacher is equal to enactment in Fishman’s model, and student-learning outcome is evident in student performance.

To provide a theoretical lens to explore teachers’ beliefs about online professional development programmes (OPD) and the acceptance of OPD, we formulated a conceptual framework as shown in Figure 1. This framework was based on the concepts of UTAUT and Fishman’s teacher-learning model, adding another dimension to studies, by applying it to the Mauritian context. Mauritius being a developing country, does not distinguish between rural and urban schools in the local context.



**Figure 1.** Conceptual framework – Factors Influencing Behavioural Intention to use OTPD

## 4. Methodology

The purpose of this study was to examine teachers’ beliefs about OTPD and determine how they shape their acceptance for PD. Qualitative methods offer an effective way to make sense of teachers’ beliefs, what they experience, how they interpret their experiences and how they structure their social world [46]. As online teacher professional development is an emerging phenomenon, the study uses qualitative analysis in order to gain insights into the phenomenon. The collaborative nature of the focus group offers another advantage of the key issues related to

the topic. The use of qualitative methods assumes that individuals interacting in their social worlds construct their reality. The qualitative approach provided an in-depth understanding of teachers’ beliefs and acceptance of OPD.

The questions for the focus group discussion were designed to assist the participants to think about professional development in general, online PD and factors that influence their views about OPD. The first two questions required participants to think about their own conception of professional development. The subsequent questions were guided by the constructs of the proposed conceptual framework. (See Appendix A).

### 4.1. Participants in the Study

The study endeavoured to obtain views of secondary school teachers’ views of online professional development programmes in Mauritius. Participants were recruited from two confessional secondary schools. These schools were purposively chosen for the study due to the ease of access. These schools enjoy a certain degree of autonomy in the operation of the school as compared to the more complex procedures in state schools where the Ministry of Education of Mauritius make the decisions. Teachers in the selected schools have gone through PD programmes in the form of workshops, seminars and short courses during their career. Fifteen participants were selected taking into consideration gender, qualifications and mode of delivery of PD programmes. The final sample comprised six male and nine female teachers with academic qualifications ranging from bachelors to master’s Degrees (Table 1).

Three focus groups of five participants each were formed. The questions were grouped in themes to facilitate the interpretation of the collected data. The researcher served as the moderator of the discussion, which was recorded using an audio recorder. All three sets of data were analysed for related themes and sub-themes. The focus group discussions provided an opportunity to describe teachers’ beliefs and opinions on the topic providing a deep understanding of the research phenomenon to determine their level of acceptance of OTPD.

**Table 1.** Participants' profile

Participant	Gender	Qualification	Year of experiences	Subject taught	PD delivery mode
Teacher A	F	Bachelor degree (Following PGCE course)	3	Economics	Face-to-face mode
Teacher B	F	Bachelor degree (Following master degree course)	3	French	Face-to-face and blended mode
Teacher C	M	Master degree	3	Economics side	Face-to-face and blended mode
Teacher D	F	Bachelor degree (Following master degree course)	2	Mathematics and Science	Face-to-face and online mode
Teacher E	M	Master degree	8	Mathematics and Science	Face-to-face and blended mode
Teacher F	M	B. Ed	13	Economics side	Face-to-face mode
Teacher G	M	B. Ed	13	Mathematics and Science	Face-to-face mode
Teacher H	F	Bachelor	6	English	Face-to-face and online mode
Teacher I	M	Bachelor degree	10	English and French	Face-to-face and blended mode
Teacher J	F	Bachelor degree	12	Economics side	Face-to-face mode
Teacher K	F	Bachelor degree	11	Economics side	Distance learning mode
Teacher L	F	B. Ed	9	French	Face-to-face mode
Teacher M	F	Bachelor degree	0	Mathematics and Science	Face-to-face mode
Teacher N	F	Bachelor degree	0	English	Face-to-face and one module online mode
Teacher O	M	Master degree	8	French	Blended mode

#### 4.2. Ethical Considerations

Ethical approval was obtained from the university, and informed consent was received from participants. These measures assured participants of anonymity, right to withdraw and lack of any harmful consequences arising from the work. The intended participants were approached individually, to build a rapport with them right from the start of the study, to obtain trustworthy data, and to establish confidence in the findings as the data collected reflected their voices about their beliefs about OPD.

#### 4.3. Data Analysis

The data produced through focus group interviews were first transcribed into a word processing file for analysing. The transcription was done by the researcher to maintain the anonymity of the participants. In consultation with the participants, the discussions were carried out in Mauritian Creole, or KM, to enable them to express their views better and to elicit richer information without any language barrier. Nonetheless, for the purpose of the research write up, the quotes have been translated from KM to English. Each participant is coded such that the focus group and the number in the group are indicated, e.g. P13 indicates participant 3 in group 1.

We identified concepts within the purview of UTAUT

and Teacher-learning model. By the process of concept-driven and axial coding – explained further in the analysis section – the following four dimensions of perceptions and beliefs were identified, namely, Performance expectancy, effort expectancy, facilitating conditions, teachers' experiences with PD and beliefs. Teachers' experiences with PD were further broken down into sub-themes. These sub-themes revealed the factors that influence teachers' beliefs about OPD. Each of these themes are provided in Table 2.

**Table 2.** Themes and sub-themes from Focus Group

Themes	Sub-themes
Teachers' experiences with teacher training programmes	Theory versus practice
	One-size-fits all
	Professional growth and progress
	Unfamiliarity with technology – Online learning
	Learning Self-efficacy
Performance Expectancy	
Effort Expectancy	
Facilitating Conditions	

## 5. Analysis and Discussion

This section presents the analysis of the findings of the interviews. To understand teachers' beliefs, it is important to understand the perceptions, opinions and experiences of the sample group of teachers in Mauritius. Teachers' teaching experience varies between two to 13 years. It was expected of teachers to attend teacher professional development programmes – as many had only an academic qualification. These PD courses usually took place after formal school hours. All teachers attended at least two courses during their tenure.

The minimum qualification of all participant teachers was a degree qualification. Hence, it is expected that the sample of teachers selected for this study would provide an informed and a well-rounded view of online professional development. A detailed description of each theme, together with illustrative comments from participants' interview transcripts, is presented below. Where necessary, the authors inserted a word, or words, in parentheses to make the quote more understandable.

### 5.1. Teachers' Experiences with Teacher Training Programmes

#### 5.1.1. Theory versus practice

According to the study participants, the teacher professional development courses involved workshops, seminars, training and classroom visits where the trainers disseminated a lot of theories which are not related to their school context. As indicated in the excerpt,

“A lot of theoretical things, as if taken from books but which don't bring many answers- answers which we really need, which we need in class because I think each school has its reality and each class its reality,...but how can this really help us in our classroom ... I remain a bit sceptical.” (P14)

A teacher stated clearly that not all the theories learned in teacher training programmes are useful in the school context, and that there are other factors that prevent the application of these theories. They seemed to think that sharing practices would be better served if they could collaborate with teachers across the country. This could happen in an online space.

#### 5.1.2. One-size-fits all

The participants indicated that training carried out in a face-to-face mode through workshops or seminars delivered in one-size-fits-all mode (general form) is not adequate for the school context. We must find alternatives for one-size-fits-all education to cater for learning differences and help the learners to develop to their potential. These PD alternatives must provide opportunities for teachers to have access to resources which are more specific to their needs. Online PD can provide opportunities to offer more tailor-made PD for

teachers as indicated by the excerpt below.

“In reality offering courses which are more specific will be more adapted and relevant to our context and our situation. More research needs to be done first. But don't put general courses which we can have anywhere on the internet, more specific ones are needed.” (P14)

The participants in this study acknowledged that everyone is unique, so we need to provide spaces so that each learner can be developed to his or her highest potential; thus, teachers would be able to see the outcome in student learning. The participants pointed out that the trainers are not familiar with the schools' context. Therefore, they deliver their knowledge using traditional modes such as books, board and chalk (as a teacher in a classroom), which is inefficient as participants commented in the following excerpts:

“Use book, board, as a teacher in a classroom....that is traditional as was done before.” “As if, book approach”... board, chalk.” (P32)

“Even though the trainer comes to the school, he/she does not know the school context. The trainer just talks about theories which are not really applicable to our classroom situation.” (P14)

Teachers' professional learning must move towards demand-driven models where teachers are active participants as co-constructors of knowledge – thus knowledge is created by teachers for teachers. This can be achieved using OPD thus reducing gaps in contextualising theories. In this way professional development content can be grounded in the teacher's discipline rather than being generic.

#### 5.1.3. Professional growth and progress

Teachers admitted that they grew and progressed professionally though only their content knowledge improved. They pointed out that teachers need more than just increasing their content knowledge. They need to be shown or advised on how to teach. The excerpts from several participants reveal this belief.

“As book knowledge is not enough, we need professional development which provides more support to enable us to do our daily work more efficiently.” (P13, P11)

“It is to keep informed as Sheila said informed all the time in the field. Lots of things are changing, even the technology.” (P34, P22, P32)

Unfortunately, methodology, that is, the planning, timing, procedure, assessment, and remedial action, are rarely offered in textbooks. This confirms what was found in literature where professional development is usually equated with continuous learning possibilities offered to teachers and other individuals in the educational field [5]. The participant teachers in the focus group highlighted the

importance of being lifelong learners in line with what Liu (2012) claims, as the learning standards are continuously being redefined. Given that most teaching and learning took place in a blended in the current pandemic, it is likely that teachers would be inclined to collaborate and learn more easily from OTPD courses.

#### 5.1.4. Unfamiliarity with technology – Online learning

Teachers tend to lean towards what is familiar in the approach to teaching and learning, which in line with Oleson and Hora's (2014) claim. Using the approach of the traditional professional development is what teachers seem to gravitate to. In the discussion, it emerged that they are afraid of the unknown and therefore do not venture to the online learning approach. This is evident in the excerpt below. Therefore, it is necessary that teachers have some basic computer skills and knowledge to accept OTPD programmes.

“Exactly I always go towards what I know, rarely towards what I do not know, towards unknown. The unknown frightens me ...the users must know the ‘code’ while using internet ... for example how to download materials or upload assignment on the internet.” (P21)

One teacher indicated that they must:

“learn how to download or upload materials or even search on the web.” (P21)

This study affirms that people learn more effectively with technologies with which they are familiar for ease of use.

#### 5.1.5. Learning Self-efficacy

Another critical element is teachers' self-efficacy to learn online, which will positively influence the relationship between online technologies and the online academic achievement of the teacher [37]. For teachers to be successful in OPD, an important factor is needed, that is “familiarity with technology” [5, p. 126]. Vu et al [5] argue that even if teachers' technical competences have increased over the last years, the pedagogical implementation of ICT has remained constant in classrooms. It emerged that even after attending PD courses, teachers often feared the use of technologies, thinking that they were not technology experts. This suggests that teachers' computer skills are an important construct for an effective OPD implementation as Reeves and Li [33] claimed in their study. It is worth noting that pedagogical application of technology in the classroom does not depend only on familiarity with technology.

Self-efficacy is an important driver for effective PD outcomes. For example, one interviewee said:

“Willingness of the person also come in, we can have all but if we do not have the will, it is a factor, if we do not have the will for doing it, we will have time, we will have all... will get problem... willingness to

connect”. (P13)

As indicated earlier, self-efficacy can be considered to influence the intention to accept online professional development.

## 5.2. Performance Expectancy

Teachers believe they can be more productive when engaging in online professional development programmes. In other words, they can perform their core responsibility of teaching in a more efficient and enhanced way.

The following excerpts from participants illustrate the perceived benefits derived from online learning:

“Definitely...because in some ways you will get all the materials online ... I myself in some ways I have done my study through distance learning and where you get more materials, presentations, you have a lot of support in that sense, which help you a lot to be able to cover the subject. While ...during one hour, a person is talking to you, there are many things which he/she wants to tell but...he/she stops here, online he/she can give you all the materials, support to cover the subject”.(P14)

“Teachers can manage their time more easily and adapt it to their family life or do other activities”. (P11)

“Teachers can study anywhere, at any time by just connecting to the internet”. (P33)

They can manage their time more effectively by carrying out their activities without disrupting their professional development if it is online. Some teachers might invest their time in private tuition or other activities which are remunerative as opposed to attending face-to-face traditional PD courses at a set time.

Using an online learning environment, teachers acquired PCK after online training, thus growing professionally. This learning helps them to perform their jobs more effectively.

The participants made it clear that they need PCK to improve their teaching, that is, how to teach in such a way that it is effective and importantly to share and collaborate with others online as indicated below.

“Access to facilities (others' experiences, knowledge) also will enable us to do our work, to develop as a teacher because having a book, a class is not enough ... Mastering of the subject is important but we need more than mastery. Now we can master the subject but if we don't have this plus, that is access to facilities, we cannot develop.” (P13, P34)

## 5.3. Effort Expectancy

Teachers perceive that it requires less effort to access the OTPD programmes. As one interviewee said

“We can access course or content at anytime and anywhere using our smartphones or tablets”. (P31)

Another interviewee alluded to the notion of the convenience of being able to catch-up if they were not able to attend a specific time and are not connected at the same time.

“...there is no need to be online at the same time”. (P34)

The ease with which the work can be learnt is important. Compared to the traditional face-to-face mode of learning, if the learner was absent, he or she misses the explanation and must catch up with the explanation by asking their peers, reading books or searching the web. OPD has eliminated many barriers in the training of in-service teachers with regard to access and time schedule as teachers can access just-in-time resources as well as discuss critical issues regarding their work. The trainer does not control information flow anymore; the learner [educator] does so.

#### 5.4. Facilitating Conditions

One of the most important conditions needed to facilitate teachers’ engagement in OPD is accessibility and availability of resources such as the internet. Secondary schools in Mauritius depend on governmental support to improve or develop infrastructure. Compared to other developing countries, Mauritius, for most part has internet connectivity across the country, however, teacher education has not made optimal use of the internet. The comments below illustrate the lack of infrastructure for using OPD.

“not all teachers possess a computer with an internet connection at home or even at school”. (P22)

“first thing you should have a very good ...connection, I think this is the foundation of all. (P14)

“May be if we have access to facilities also is what will enable us to be able to do our work, to develop as a teacher because having a book, or a class is not enough, we need more facilities also”. (P13)

Interestingly, OPD can be offered all the year round and provide opportunities for the participants to enrol at any time. Having the opportunity to connect to the internet both at home and at their workplace, it will enable teachers to access information when needed. Education is about sharing, and internet has empowered this sharing efficiently as it can accommodate large audiences at the same time. Due to the openness of OPD, teachers can have access to:

“...foreign resources which would not be available locally”. (P34)

“...online learning is not restricted to a country only but open to the entire world: this learning can happen

without travelling abroad”. (P34)

The findings show that the required resources such as time for teachers to access PD at their workplace are necessary. Discipline subject-embedded professional development can be provided through online learning. It was challenging for teachers to attend PD programmes during the afternoons but with online learning, time is not a concern. The online course is offered in an asynchronous mode, as one of the participants said

“It was challenging for teachers to meet at a given time where all people meet in only one physical place, sitting, so contact....”. (P33)

There is no need to book a seat as in face-to-face sessions where only a fraction of teachers can participate in the training sessions [1], and the learning resources are no longer limited for a period. Moreover, the online course allows teachers to learn anywhere, hence the site or location is not a limitation.

## 6. Discussion

Teachers in this study claimed that they needed more contextualised support in their daily work. The participants from this study believed that PD should focus on how to teach. In line with former studies [19] and from the results obtained, it can be deduced that workshops and training should not be the only components of professional development courses. Training, seminars and workshops should be followed with continuous support. In practice it is difficult to offer follow-up sessions to teachers attending these programmes. However, by participating in online learning programmes, support can be obtained as, and when required as espoused in [20]. Therefore, there is a need to develop professional learning communities or networks.

The elements to be taken into consideration while designing OPD are the content and the activities, which are influenced by teachers’ experiences with OPD. Experience is one of the five control variables present in the UTAUT model [39].

Challenges for online teacher training are the elements that online training institutions and educational stakeholders need to consider while designing, implementing, and offering online teacher professional development.

Teachers’ experiences with PD refer to factors that influence teachers’ usage of OPD. In this study, the necessary factors as shown in the conceptual framework, *Teachers’ experiences with PD, performance expectancy, effort expectancy, facilitating conditions, and knowledge and beliefs* together influence teachers’ behaviour in accepting the use of OTPD. Teachers’ experiences with OPD affect teachers’ knowledge and beliefs about OPD [40, 41], which directly influence teachers’ usage of online



teacher training programmes.

Teachers' knowledge and beliefs of online professional development are constructed through the conceptions of teaching, and experiences that teachers acquire during their careers.

Their knowledge and beliefs affect their behavioural intention to use OPD, thus influencing their usage of online teacher training programmes.

## 7. Conclusions

This study set out to determine teachers' beliefs about online teacher professional development as an alternative to the traditional TD programme. The results of this study revealed that the current method (general trainer-oriented mode) of delivering professional development is ineffective for teachers. Teachers need more contextualised professional development which is related to their individual teaching needs. They believe that the content and activities of OPD influence their usage of OPD. Taken together, these findings suggest that teachers' intentions are influenced by teachers' experiences with PD courses, performance expectancy, effort expectancy, the facilitating conditions that prevail, and their knowledge and beliefs. In general, teachers must have the opportunity to engage in online professional development to improve their practice. Prior to this study it was difficult to make predictions about how teachers viewed online professional development in the Mauritian context. Hence, this study contributes to our understanding of teachers' beliefs about OTP with a view to develop online teacher professional development programmes. The scope of this study was limited to two confessional schools. A further study could consider other confessional, state, or fee-paying schools.

## Acknowledgement

This paper is based on the PhD thesis submitted by the first author. Hence part of the content is from the doctoral thesis.

## Appendix A

### Guideline questions for Focus Group Discussion

General view of TP

What do you perceive teacher professional development to be?

To what extent do TPD change your views and values of education?

What do you value most about these programmes?

Do you think collaborating with other teachers is beneficial?

Do you get an opportunity to collaborate often?

### Views of OTPD

Would OTPD be more beneficial to collaborate?

What makes TP easy for you to enrol in?

Do you think TPD should be continuous?

How best can this be achieved?

### Performance Expectancy

Do the resources in Online professional development programmes help you in your teaching?

How does online professional development assist you in your work as a teacher?

### Facilitating conditions

Do you have computers and access to computers and interne facilities at,

1. Home?
2. School?

Are you able to access online resources related to TP?

Are you familiar with the different technologies in use? e.g. Moodle, MS teams?

Is management aligned with the view of having OTPD during or after school?

### Social Influence

Are other teachers you know of enrolled in online TP?

What are they saying about it?

### Effort Expectancy

Does it require a lot of effort to work with TP in the traditional way or using online programmes?

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