Title	Uncovering Singapore teachers' motivation to participate in professional development activities
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Source	*Literacy Information and Computer Education Journal, 5*(1), 1369-1375
Published by	Infonomics Society

This is the author's accepted manuscript (post-print) of a work that was accepted for publication in the following source:

Chang, C. –H., Teng, P., Tan, A. L., Joiko, S., Chan, Y. W., & Poh, M. S. (2014). Uncovering Singapore teachers' motivation to participate in professional development activities. *Literacy Information and Computer Education Journal, 5*(1), 1369-1375.

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Uncovering Singapore Teachers' Motivation
to Participate in Professional Development Activities

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Abstract

Set against the motivation to enhance Teacher Professional Development (TPD), the question was raised of what makes a teacher want to engage in TPD. While a literature scan has shown numerous studies on TPD that advocate different types of TPD that teachers consider effective, the Singapore literature suffers from a dearth of empirical study to show what motivates a teacher to engage in TPD. Adopting a social psychology framework of the Theory of Planned Behavior (TPB), this study seeks to address the research problem through a baseline study and an extended exploration on the factors affecting a teacher's motivation to do TPD. A variety of data collection methods are described to study this. In-depth interview and questionnaire survey will be used to construct the baseline while observations and fieldwork will deepen the exploration and provide the triangulation to data collection, essentially improving the reliability of the study. This paper will report on the findings from the in-depth interviews and elucidate the reasons for teachers taking part in TPD in Singapore.

1. Introduction

The Organization for Economic Cooperation and Development (OECD) [1] recognizes that TPD in Singapore is strategically positioned to respond to institutional requirements, teachers and learners' needs. Indeed, Moursched & Barber [2] consider the Singapore system's thoughtful emphasis on the on-going professionalization of teachers as a key factor in its sustained performance in education.

A 100 hours of TPD entitlement together with a focus on the quality of learning in TPD were aimed at raising teacher professionalism. The range of TPD options include workshops, sabbatical leave, mentoring for newly inducted teachers and courses leading to formal certifications [3]. However, anecdotal accounts point to uneven engagement in TPD despite this provision. There is, for instance, little data on how the 100 hours are utilized by individuals, and if teachers attend TPD out of genuine interest or out of a sense of obligation. The evidence of translation of knowledge gained from TPD to actual classroom practices is also lacking.

2. Research Problem

Teachers engage in TPD with the aim to improve student learning, to learn how to manage school and system-related changes, and to respond to the vocational need to professionalize [4]. The decision to engage in TPD is mostly a personal choice [5]. Though most are convinced that TPD is an important component of their professional lives, teachers feel constrained from sustained and meaningful engagement due to lack of time [6], [7] &[8], inconveniences experienced such as disruption of teaching routine [7], the added burden of extra workload [8], unsupportive superiors [6] & [8], inadequate funding [8], as well as their own disinterest in TPD [6] & [8].

Satisfaction towards TPD engagement is determined as to teachers' perception whether these activities are congruent to their needs and if they are deemed to address the daily challenges of the classroom [9]. However, it is a reality that they cannot at all times decide which TPD activity to take part in. School management decisions, bureaucratic mandates as well as the need to complete required hours for appraisal purposes also feature as deciding factors [5]. Nevertheless, there is a need to consider the teacher as an active agent who is capable of making decisions as to whether or not he or she would want to take part in a TPD activity. Is this decision making based solely on the belief of the teachers or are there other factors that determine the translation of such belief into behavior? This fundamentally requires a study to examine why teachers engage in professional development and probe into how they get involved.

3. Method

Based on the problems defined, the following research questions have been identified.

RQ1: Why do teachers engage in professional development?

RQ2: How do teachers get involved in professional development?

Essentially, the research study investigates the relationship between teachers' beliefs vis-à-vis their intention to and actual involvement in professional development activities. Guided by the Theory of Planned Behavior (TPB), it seeks to trace the causes of behavior to the teachers' set of beliefs. The proposed framework considers that a behavior or an intention to commit an act follows a reasonable form and can be understood in terms of behavioral (attitude towards the behavior), normative (subjective norms) and control beliefs (behavioral control) [10].
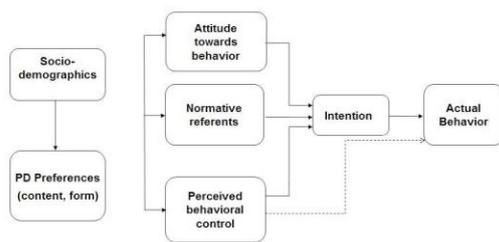

Figure 1: Conceptual Framework

For the purposes of this research, these concepts will be operationalized as follows:

Attitude to the behavior refers to the individual's positive or negative evaluation of performing a particular behavior and, in this case, engagement in TPD. This is measured by assessing the accessible beliefs of the teacher about the consequences of engaging in certain PD types. These *behavioral beliefs* are then reinforced or weakened by the teacher's *evaluation of outcomes* associated with the behavior and the strength of these associations.

Subjective norms are social factors that influence a person's judgment. A teacher's perception of social pressure to perform or not to perform the behavior under consideration, or *normative prescriptions*, is seen to affect his decision to engage in PD such as if certain individuals or groups, her referents, approve or disapprove of a certain approach. If the teacher is *motivated to comply* according to the preferences of his referents, then social pressure significantly influences his decision to engage in PD activities.

The third element, **perceived behavioral control,** is a person's sense of self-efficacy to perform the behavior of interest. This refers to the hindrances and opportunities in performing the desired act that could inherently increase or reduce the perceived difficulty of doing so. In this sense, *control beliefs* are made up of a teacher's perception of the level of control he holds relative to the act of engaging in

professional development. The *power of factor* to facilitate or inhibit the performance of said behavior only confirms whether one's intention is strong enough to lead to actual behavior.

Basically, the theory's constructs maintain that teachers engage in different professional development activities with varying frequency based on their personal beliefs of the positive and negative attributes of PD engagement, when there is enough social pressure from peers, superiors and institutions and when they believe that to perform the behavior means they have enough resources and agency to do so.

The Theory of Planned Behavior claims that behavior can be predicted with considerable accuracy from intentions and perception of behavioral control as backed by numerous studies [11] encompassing the fields of education, healthcare, marketing, and social norms research.

This paper reports on the research design for the entire study as well as discuss the results of a preliminary exploratory phase in the form of interviews with participant teachers. The research design starts off with exploratory and consultative research, to confirm general claims from the literature before implementing a pilot study to validate a survey instrument which is intended to be carried out with 10 percent of the teacher workforce. While the TPB framework has been proposed at this point, there is a need to affirm the framework through this phase of exploratory research.

Among those who took part in the interviews are teachers, and their reporting officers. The views collected are meant to create a holistic, multi-perspective study structure of inquiry.

For teachers, questions asked aim to elicit information regarding their involvement in TPD activities, prevailing school culture vis-à-vis TPD, as well as their familiarity with existing policies on TPD. A set of guiding questions were drawn up as part of the research protocol for the in-depth interview of teachers. These include:

a. What does 'professional development' mean to you?

b. What do you think are the qualities of a professional teacher?

c. How do you see yourself going through the process of 'professionalizing' through the years?

d. What are your thoughts about the 100- hour entitlement of teachers to engage in professional development?

e. What is the type of TPD activity that you like most? Can you share a positive thought/experience regarding your TPD engagement?

f. What is it that you dislike most about TPD? Do you feel any negativity towards engaging in TPD?

g. What to you are the uses of TPD?

h. What factors do you take into consideration when deciding to engage in PD?

i. Do you plan it ahead of time? Do you sign up on your own? Do you consult other parties?

j. Are you often nominated (by HOD, Principal, others) to attend TPD activities? Are you often invited (by external parties) to attend TPD activities?

k. How do you engage in TPD? What types of TPD do you normally engage in?

l. In a year, do you normally use all 100 hours for PD? If no, why? What are the consequences?

m. If you do not wish to engage in PD, are you free to decide not to?

n. What are the usual factors that prevent you from participating in PD?

Same sets of questions were asked of reporting officers, with the addition of their perception of why teachers are engaging in TPD, the effects of TPD on the professionalism of educators as well as the general trend in TPD involvement among teachers. Additionally, the interviewer asked permission to access TPD materials in the schools for purposes of research (teachers' TPD portfolios, newsletters, reports).

The next steps for the research will be to collect data through an online survey questionnaire after a pilot implementaion. The in-depth interview that will be reported in this paper serves an added function of affirming the constructs to be used in the pilot and subsequent online survey. The respondents' socio-demographics, each of the belief's factors (behavioral, normative and control), intentions to take part in professional learning and report of past engagement in TPD will be measured by the survey.

The survey applies to all school teachers in Singapore from primary, secondary and junior college levels. Cluster sampling will be employed as determined by the distribution of teachers by school level. Apart from basic demographical facts, information on teaching experience also counts for the analysis. Belief factors measurement are to account for the variations in teachers' intentions to engage in and reported actual involvement in various forms of professional development activities. The items will be developed using Ajzen's [10] Theory of Planned Behavior parameters as a basis for adaptation.

Teachers' overall evaluation of TPD engagement will be measured in two ways: through looking at behavioral beliefs and their evaluation of the outcome of the behavior. Behavioral beliefs refer to teachers' perceived consequences of engaging in TPD (e.g., "Time spent in TPD is time well-spent"). Whether features of the behavior merit negative or positive judgment from teachers will constitute measures for the evaluation of outcome (e.g., "100 hours of TPD is necessary/unnecessary for my professional growth).

The factor of subjective norm refers to the degree to which social pressure or normative prescriptions have an effect on a teacher's decision to engage in professional development activities. To ascertain these factors, normative values of teachers (e.g., "My co-teachers pressure me to get involved in TPD") will be taken into consideration along with their motivation to comply with external sources of pressure (e.g., "Doing what my reporting officer advises is important/unimportant")

Control beliefs refer to a teacher's perception of the extent of his capacity to engage in TPD as well as his awareness of the presence of deterrents to doing so. Questions eliciting a teacher's perception of control over TPD involvement (e.g., "Whether I complete the 100 hours of TPD is entirely up to me") and the expressed confidence on his ability to do so (e.g., "I could enroll in any TPD course I want to") will be asked.

An item was also constructed to measure a teachers' reported likelihood to engage in professional development in the future. Additionally, items to tease out what type of TPD activities they plan to engage in will be solicited. Actual TPD engagement will be measured using reports of past behavior.

Questionnaire responses will be automatically coded and scored by an online survey platform as well as using software such as IBM text analytics for SPSS. Univariate analysis will be conducted through generating descriptive statistics for each of the items in socio-demographic, and belief factors. The variables will be sub-divided into clusters accordingly and will then be tested for associations.

In order to increase the internal reliability of the data collected, several triangulation methods will be employed including focus group discussions, observations and fieldwork. Observations will afford the researcher another perspective to triangulate the claims that are made by the respondents too. The data collected from these various sources will then be integrated and analyzed holistically with the survey data to provide both meaningful empirics and rich, contextual understanding of TPD in Singapore. Thematic analysis will be employed for fieldwork and focused-group discussions data.

4. Findings from the exploratory phase

The first exploratory and consultative phase was completed with the interviews of 14 teachers. The participants were recruited as research informants using a purposive sampling to ensure representation of the different educational levels as well as social and professional factors such as gender, teaching experience and qualifications. The participants were interviewed between the months of October and December 2013.

Each of the interviews was then transcribed and from the transcripts, two types of analyses were conducted, a content analysis of the interviews and a case example of 3 teachers [11]. In relation with the first analysis, a total of 14 teachers were interviewed:

- 6 teaching in primary level, 5 in secondary and 3 in junior college;
- 6 male teachers and 8 female teachers;
- the number of years teaching went from 1 up to 29;
- the highest education qualification considered Bachelor Degree (pass and with Honors) and Masters.

Even though the sampling was not meant to be statically representative it showed a similar pattern to the education system [12].

Teachers' TPD engagement was measured throughout the content analysis of two components. First by looking at the three beliefs described by Theory of Planned Behavior: 1) behavioral, 2) normative and 3) control. And second by describing the actual behavior considering the frequency of the engagement, the process of programming the decision, who the teachers go with and the type of TPD engaged in (in terms of the organization and specific modality for professional learning). In order to make sense of the interviews, a coding scheme was designed using the following dimensions:

1. **Behavior** is considered the teachers' engagement in professional development that will be measured using a report of past behavior.

2. **Attitude Towards the Behavior** - refers to the examination of behavioral beliefs and outcome evaluations to understand the role of attitudinal considerations in the determination of intentions and behavior.

3. **Normative Referents** refer to the degree to which social pressure or normative prescriptions have an effect on a teacher's decision to engage in professional development activities; it refers to teachers' belief about how other people, who may be in some way important to teachers, would like them to behave.

4. **Perceived Behavior Control** - A teacher's perception of the extent of his/her capacity to engage in TPD as well as his/her awareness of the presence of deterrents to doing so.

5. **Suggestions for improvement of TPD** refer to the recommendations given by the teachers about how to improve the TPD activities. It considers different levels of suggestions such as improvements in the processes, changes in the policies, modality of the TPD activities.

While the codes are still being analysed intensively for all 14 interview transcripts, some preliminary patterns can be observed. While the small sample size of 14 teachers reported a range of actual engagement in TPD, it would be difficult to generalise the number of hours and provide an indicative range of TPD activities that these teachers took part in. In terms of attitude towards behaviour, 9 of the 14 teachers felt that TPD was a way for them to upgrade their knowledge and skills. In fact, this accounted for close to 35.8% of all the codes that are ascribed to positive attitude towards behaviour. On the other hand, 8 out of the 14 teachers felt that TPD did not contribute to their professional needs. While this seems to be contradictory, a closer examination of 3 case studies below will elucidate this apparent contradiction.

In terms of normative referents, the Head of Department (HoD) was cited by 6 out of the 14 teachers and the associated codes accounted for 27.3% of all codes in the normative referent dimension. While the HoD is normally the direct reporting officer of a school teacher, it would also be interesting to uncover the role of the HoD in influencing teachers' motivation to take part in TPD.

For perceived behavioural control, time was cited most commonly as a factor. Indeed, 9 of the 14 teachers mentioned time as a behavioural control and it accounted for 24.3% of all the codes in this category. It is unsurprising that setting aside more time for TPD came up again in the codes for suggested improvement for TPD.

In order to contextualise these preliminary findings, 3 case studies are examined. Analysis of the cases reflected the beliefs and the actual behavior of engaging in TPD, with some potential tension points. The illustrative case examples considered 3 teachers of the 14 interviewed, with different backgrounds and experience in the teaching and learning process:

1) Teacher A had 26 years of experience in teaching geography to students from secondary level (grades 7 – 10) with a Bachelor's degree;

2) Teacher B had 5 years teaching geography in a junior college (grades 11- 12) with a Master's degree;

3) Teacher C had 12 years of experience in primary level (grades 1 – 6) teaching physical education with a Bachelor's degree.

The results presented below are a synthesis of the content analysis of the interviews using the qualitative data analysis software Nvivo, as well as the case examples of the 3 teachers.

5. Findings and Discussion

The Theory of Planned Behavior has supported the study to build a strong theoretical framework to understand how teachers engage in professional learning. Before we examine the main concepts of the theory through the results uncovered by the content analysis and the case examples, it is important to describe the teachers' TPD behavior.

Using the 100-hours entitlement of TPD as a guideline of measurement of the hours engaged in professional learning it is observed that the range per year may vary from 20 to more than 100 hours based on what the teachers have reported. Even though TPD is part of a teacher´s annual performance appraisal, it seems there is no longer a preoccupation with meeting the target 100 hours as it had been the case in the early years of implementation [4]. The teachers interviewed believed that neither will they be promoted if they attended more TPD nor will there be any consequence if they did not participate in professional learning activities. The decision to engage in TPD, can be either mandatory (by nomination, or teachers perceiving it as an expectation to attend) or voluntary.

"Often nominated. I can say ¾ of the time it's nominated by principal, the other ¼ it's because I *want to go*" (Teacher A).

Most teachers mentioned that they go for TPD activities alone and only on a few occasions did they go with colleagues. The main reason is because teachers believe that TPD is a self-development process and therefore they viewed it as an individual journey. Although TPD is recognized by teachers as necessary for their professional work, they feel that it should be subsidized. In this sense the case examples showed that Teacher A will not go for TPD if the fee for the course has not been paid for by her school. However the 3 teachers are willing to pay for TPD activities such as conferences if they feel there is a benefit to their own development. Indeed, the resources that the state has devoted to TPD are so substantial that teachers have come to expect that they do not have to pay for TPD. In reality, their TPD is either paid for by MOE or by their school. The willingness to pay for one's own TPD indicates a drive for learning that is beyond the norm.

The usual process of engaging in TPD will be planned ahead, mostly at the beginning of the school year where teachers have to set their annual goals with their reporting officers. However, teachers can only sign up for some of the TPD activities as they might have prioritized their TPD to attend other courses:

"*PD activity should always be planned ahead and it gives teachers a bit more leeway to make* arrangements. If it comes at a very short notice, it's *very difficult because you may have already committed yourself to many other things within that same time period and some things cannot be shifted*" (Teacher B).

Also professional learning is not just about attending stand-alone courses. There is a range of other activities, such as daily conversations with their colleagues to share experiences and practices; be in touch with the classroom every day; mentoring new teachers; professional learning communities; conferences; among other activities. Finally the interviews showed that TPD should be a collective and continuous process:

"PD allows me to try new strategies and to learn *from my other teachers also. Because sometimes* teachers work in solo (…) *but this assumes that the other teachers are also on the same track as us. That* they're also willing to read up on the textbook, that they're also willing to share, they're also willing to discuss and be positive. Because if they're not positive, then it's useless" (Teacher A).

However teachers' engagement in TPD is determined by three main beliefs in accordance with the Theory of Planned Behavior. The first belief defines an attitude toward a behavior in terms of the evaluation of the consequences of performing (or not) the behavior, this belief is called *behavioral* [13]. The results showed that teachers' behavioral belief in engaging in professional learning falls at two ends of a continuum − TPD is related to the positive outcomes of 'upgrading skills and knowledge' and 'alignment with their needs as teachers'; and on the other hand is viewed negatively when there is 'no contribution to their needs' and 'the implementation can be improved'. These results are also supported by the case examples that showed that there is a strong relation in terms of the attitudes towards the behavior and the professionalization of teachers. Engaging in TPD is necessary for teachers' self-development, especially when they recognize that it is important to constantly upgrade their knowledge and learn new strategies to growth as professionals:

"I think as professionals we have to uphold a kind of *high level of competency in what we do, and the onus* is actually on us to upgrade ourselves (…) that's *what defines a professional, basically you know your job, you know how to do it well, and if you find yourself lacking, then you find ways and means to* upgrade ourselves" *(Teacher B).*

The second determinant belief is related to the idea that some specific individuals' or groups' approval (or disapproval) of the behavior, acts as a mechanism of social pressure. This kind of belief is called *normative* [14] belief. The results showed that there are two main referents in relation with the behavior to engage in professional learning: the principal of the school and the head of department . Both are present during the entire process of attending TPD. Moreover there are three situations created by the referent's influence that shapes the teachers' perception of the pressure to attend TPD. The teacher feels that engaging in TPD is related to either a 1) nomination, 2) expectation, or 3) instruction. Operationally, teachers would need to seek 'permission' from school leaders to attend training because of funding implications as well as impact on lessons should the TPD occur during lesson hours. School leaders' willingness to prioritise professional learning over operational needs of their schools will vary. The differences in supportive school environment for professional learning will affect teacher motivation to overcome these obstacles to TPD.

As the case examples showed, the action of engagement in TPD is a combination of what others expect from the teacher and her/his own expectations. Teachers may be encouraged to attend a certain type of TPD (as suggested by their principal or HOD) even though they may disagree with the idea as individuals. On the other hand they attended TPD activities that they considered necessary for their professional work. This duality is clearly exposed by Teacher A:

"Sometimes you are forced to go to a course *which you think is ridiculous and useless but you have to go because your head or your principal or MOE says you must go. The other one is when you have a choice. When they give you a choice and you choose to go. I find that much more enriching and empowering. But sometimes the course that they forced us to go ends up to* be good also. So it's like *these two different poles. You know what I mean? One you are forced to go, you have no choice but the* other end y*o*u have a choice and you want to go".

The last belief of the Theory of Planned Behavior is called *control* which refers to the presence (or absence) of factors that facilitate (or impede) the performance of the behavior. This belief leads to the perception that one has (or does not have) the capacity to achieve the behavior [15]. There are six main factors revealed by teachers that can prevent them from participating in TPD: 1) time, 2) finance, 3) teacher's needs, 4) nature of TPD, 5) student's needs and 6) supportive school climate. The first two are the most commonly mentioned:

"Well firstly I'll look at time, as well as whether it *fits into my schedule. There are many courses and workshops, which I am interested in but unfortunately if it doesn't fit into my schedule,* because you know, you can't be away for too long *and I don't want to miss too many classes otherwise, you know, you have problems with catching up with students. Unfortunately from a very practical point of view, time consideration is very important*" *(Teacher B).*

-The TPD activity-"that's available under this *TRAISI portal; it is free of charge for MOE officers. For those external courses that you want to attend, the fees are covered by the school. So it's very important for the heads to budget this before the year starts for professional development for the teachers. MOE also gives us some money, but it may not cover all the fees for the courses. So the heads themselves they foresee that this particular year if there is this conference that you want your staff to go, then you may need to budget for that*". *(Teacher C).*

In summary, the three beliefs from the Theory of Planned Behavior are present in all teachers. Some tensions can be seen between attitudes towards the behavior and normative referents: the actual participation of TPD is determined by whether permission is given by school leaders (normative referents) more than the behavioral belief that attending TPD is necessary and crucial for professional growth. On the other hand, behavioral and normative beliefs are more prominent than control beliefs: Teachers are professional and altruistic in upgrading their own skills and knowledge through TPD with the ultimate goal of helping their students. Government policies such as the 100-hour entitlement have helped to reduce the obstacles of time and finance, allowing teachers to concentrate more on their TPD needs than overcoming the factors that prevent them to take part in TPD.

6. Conclusion

Teacher professional development in Singapore hangs on a balance between institution-determined process and independent decision-making for teachers to choose what TPD activities they want to engage in. While they are given free rein for their career development, there exist structural elements to guide and direct each teacher to what the system considers an ideal path as well [16]. This study aims

to map the TPD landscape in the city-state from the perspectives of teachers as contextualized within prevailing policies and practices of agencies providing TPD and the education ministry. An Academy of Singapore Teachers (AST) was set up in 2010 to raise the level of teacher professionalism in the system. It has not resulted in a marked increase in the enrollment into the in-service programmes at the National Institute of Education (NIE), the sole teacher-training institute where the first three authors come from. Indeed, the NIE stands at a crucial junction to assess why teachers will want to engage in TPD. The findings of this study will inform NIE on how TPD is made sense on the ground and at the same time provide information for the group in rethinking its course and if needed, modifying its nature of service delivery. It will also allow for a clearer articulation of how AST and NIE can work collaboratively to raise teacher professionalism, an ideal that both institutions believe strongly in. However the mission of AST is to promote teacher-led professional excellence, it will not necessarily lead to an increase in enrolment of in-service programmes at NIE. This teacher-driven professional excellence can be realised through networked learning both at clusters, schools or the system level. However, workshops conducted by 'expert others' such as by NIE, are still a significant part of TPD. The question is how these non-teacher-led PD can be made relevant and attractive to teachers when they have been encouraged to see peer-to-peer learning as something relevant and valuable too. While much of education research in Singapore focuses on the teaching and learning process, the preliminary findings and subsequent survey will inform program development for teacher education and consequently benefit the education system on the whole.

This research takes on a hybrid approach including exploratory and descriptive schemes to provide baseline information on TPD engagement in Singapore. In particular, we endeavor to examine the motivation behind why teachers would want to engage in PD. It is only through understanding the needs of teachers' PD that effective and efficacious approaches to providing professional learning can be advanced.

7. Acknowledgements

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