



# Discriminating participants and non-participants in continuing professional education: the case of teachers

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There are a number of theoretical perspectives established for studying adult participation in education, but they are seldom examined together in single studies; neither are participants and non-participants examined simultaneously. This study examines the relative power of the major perspectives in distinguishing between and predicting participants and non-participants. Secondary school teachers who were participating or not participating in continuing professional education programmes were taken as target respondents. Results show that the theoretical perspectives of situations, dispositions, attitudes and beliefs in continuing professional education, and social norms and pressure, do not discriminate teacher participants and non-participants and are therefore not good predictors of the participation status of teachers. Only a few factors in the perspectives of motivations and socio-economic background are significant and meaningful in distinguishing the two teacher groups and in predicting participation status.

## Introduction

Adult participation in education has been postulated with a good number of variables, which are well set in models and perspectives. However, the various perspectives have seldom been simultaneously examined in single studies. In addition, non-participation has not been defined sufficiently precise to enable replication in empirical studies or explication in theoretical frameworks.

Pryor (1990) remarks that the testing of inclusive models – the examination of several perspectives in one study – has been difficult due to practical problems. Nonetheless, some recent empirical studies have started down this path, and they indicate that contrasting perspectives is worth pursuing in participation studies.

Despite such precedent studies, the trend has not been followed strongly or explicitly. Usually, only a few variables of one or two perspectives are adopted in single studies. With the increasing number of perspectives keyed into studying participation, it is an appropriate time to weigh the relative significance of different perspectives in the participation as well as non-participation of adults in education.

## Purpose of study

The purpose of this study is to examine the relative significance of the major perspectives of adult education participation in distinguishing between participants and non-

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participants in continuing professional education (CPE). The study examines perspectives from the fields of psychology, sociology and social psychology. Although the study does not attempt to investigate the explanatory functions of the perspectives, it reveals the power of the major perspectives in distinguishing between participants and non-participants and in predicting participation.

### Literature review

Participation studies in adult education involve several major perspectives. The following text sets forth a review of the factors of these perspectives, namely motivations and deterrents, demographic and socio-economic characteristics, personal disposition, attitudes, beliefs and social norms and pressure.

#### *Motivations and Deterrents*

The motivations-deterrents perspectives have long been established in delineating participation and non-participation (Miller 1967, Rubenson 1977, Cross 1981). Motivational factors are exclusively used for characterizing participants, while deterrents are used for characterizing non-participants. Adults, however, be they participants or non-participants in education, do possess motivations in their adult life stages. Motivations in adulthood are often linked to educational and occupational aspirations, to social and political power, to internal personal growth and so on (Ryff 1985). Hence, instead of excluding non-participants from the motivational factors arena, the argument should be: What motivational factors are more significant to participants and what motivational factors are more significant to non-participants, and do such motivational factors really predict participation status? As such, non-participants should also be examined in relation to their motivations.

Similarly, deterrent factors are not exclusive to non-participants. As remarked by Cookson (1986),

from a social-psychological point of view, the critical element in the concept of margin may be the *ratio* or the nature of the relationship between power and load as ultimately sensed by the individual. (pp. 138–139)

Deterrents are actually some unfavourable conditions in certain situations whereby adults weigh them as quite beyond their power in terms of the load they have in those situations. In that sense, unfavourable conditions could be regarded as deterrents in certain situations while in other situations they can be easily dealt with by adults and could possibly be regarded as simply irrelevant in certain situations. It follows that factors of the perspective of deterrents should be reconceptualized as situational factors and that a broader sense of load and power could then be extended to reveal the situations of non-participants as well as of participants.

Boshier's (1973) conceptualization of life-chance and life-space and Super's (1984) life roles relate to this broadening. Boshier points out that the social and psychological situations of lower and higher socio-economic groups differ in perceiving their environmental situations. By taking into consideration their personal relevance in power and load, different socio-economic groups perceive their situations as growth

possibilities or the requisites of their survival. Similarly, Super (1984) delineates six life-roles to illustrate the situational characteristics of life-span and life-space. The six roles are homemaker, worker, citizen, leisure, student and child. Choices of these life roles are personally determined as well as situationally determined, the latter of which refers to both the opportunities and barriers a person faces with respect to his/her psychological and socio-economical status. Super particularly relates these roles to career development. As remarked by Bergsten (1977), 'work role is among the most important for the total life satisfaction of an individual' (p. 34), and 'the attitudes the individual has towards work undergo continuous changes during the life cycle' (p. 35). These two points indicate the vitality as well as the situational characteristics of work to adults, and of course, to adult participation in education. Besides work role in life-space, family obligations, leisure pursuits and community participation are also significant life-roles to adults. The relative importance to education of each of these roles becomes a personal and situational variable that adults must evaluate. Therefore, job condition and work role, together with family obligations and finance, leisure pursuits etc. can be satisfiers, dissatisfiers or irrelevant to people of different situations; they can be deterrents as well as triggers to participation in education.

The definitive nature of 'deterrents' on non-participation therefore no longer sustains. A broader conceptualization of situations as acting on both participants and non-participants is more appropriate to investigating the paradigms of adult education participation.

### *Personal dispositions, attitudes and beliefs*

Other than the motivations-deterrents perspectives, the field of psychology includes perspectives of personal dispositions, attitudes and beliefs in the examination of participation. Ray (1981) and Mezirow (1991) postulate that adults, in making sense of their life experiences, have attained and formed certain perceptions of themselves, their abilities and their everyday social life world around them. Personal dispositions are perceptions of the self's strengths and weaknesses. Cross (1981) has postulated that learners must have a certain degree of self-confidence and a positive attitude to learning for them to engage in formal education, and that 'negative evaluation of personal ability' and 'poor performance in prior education' are dispositional barriers. Attitudes are the value perceptions of education; and beliefs are the perceptions of the outcome consequences of education (Cross 1981, Mezirow 1991, Ray 1981).

A person's beliefs are formed by the information a person has regarding any object. It is 'the consequence of the action, or behaviour, (that) provides feedback to the individual reinforcing belief in that object, which further refines attitudes in a continuous process of evaluation' (Ray 1981: 68).

These three factors are highly interrelated and they are important guides to personal behaviour, including decisions about whether or not to participate in education.

### *Demographic and socio-economic characteristics*

Demographic and socio-economic characteristics have long been portrayed as significant sociological perspectives in examining participation. It has been documented that the younger, the more educated, and the higher income groups generally have a

higher participation rate. Other than age, income and education, Cookson (1986), Cervero and Kirkpatrick (1990) and Gooderham (1993) have postulated that social roles, social background and social origin are important factors in determining participation.

But very often, studies on participant and non-participant characteristics are separately conducted. That is, aside from the earlier surveys of Johnstone and Rivera (1965) and Carp *et al.* (1974), where both participants and non-participants were surveyed at the same time, participants and non-participants are seldom placed together for examination. However, according to the sociological perspectives, social context is crucial in participation. Adults in a similar macro social context (such as localities, organizations, occupations etc.) might possess a similar outlook on learning prospects. In other words, the likelihood of education participation among participants and non-participants under the same macro social context might not be highly distinct. This is to suggest that participants and non-participants should be from the same macro social context if irrelevant factors are to be scaled down and controlled. Studying both participants and non-participants from a similar social context is equally meaningful in detecting intragroup, other than intergroup, differences.

The sociological perspectives of demographic and socio-economic characteristics in adult education have been strong in recent years in explaining and predicting participation. For example, there have been studies by Saindon and Long (1983), Dimmock (1986), Cervero and Kirkpatrick (1990), Stolzenberg (1994) and Kwong *et al.* (1997). Furthermore, more complicated theoretical frameworks have been developed. Cookson (1986) has reiterated the many personal psychological factors suggested in Cross' (1981) model, and has included social background and external context, both psychological and sociological, in his model. Cookson's model is a grand one in that it is a 'conceptual scheme for the integration of currently separate, disparate, and discipline-bound theoretical explanations and research findings' (p. 139).

However, many of the studies and models focus solely on participation. In Cookson's model, participation is not differentiated into three distinct sets. It is regarded as a continuous variable so as to take into account the continuous nature of participation. Such a continuous treatment of the different sets of participation cannot adequately reveal the salient features of non-participation. Low values on the participation variable do not necessarily equate to non-participation. Factors that are delineated as influential on participation would be mistaken as factors that do not affect non-participation, or that the factors that affect non-participation are the reverse or the opposite values of the factors that affect participation.

Another model that takes a similar approach in explaining participation is Gooderham's (1993) model. Gooderham has also included a wide range of perspectives and variables: availability of courses, attributes towards learning, social mobility, socio-economic status, reference group etc. The model takes on a force-field approach in explaining participation – in explaining how participation is realized under various factor forces. However, the model does not include how participation is unrealized under various factor forces. Gooderham's model has similar implications to Cookson's model: non-participants probably do not have such factor forces acting on them; or, the factor values are just the reverse or opposite of the participation factor values. These interpretations may be dangerous.

The models and studies discussed above clearly point to the need for participation and non-participation to be dealt with as independent entities and to be examined simultaneously. A recent study that includes both participants and non-participants is

done by Henry and Basile (1994). However, although a good number of factors have been included in their study, many of them are only presented as frequencies. And since the number of variables entered for logistic regression is unknown, it is quite difficult to make any conclusions about the differences. Further, although Henry and Basile have identified many variables in the field, recent perspectives on social psychological factors have not been analysed in the logistic regression.

### *Social norms and pressure*

The social psychological perspectives of social norms and pressure have become primary in recent years in explaining participation. Better yet, the studies that employ social psychological perspectives often examine both participation and non-participation, examples of which include the studies of Southern (1980), Waldon (1985), Pryor (1990) and Yang *et al.* (1994). However, studies of such perspectives are still scarce.

According to the social psychological perspectives of social norms and pressure, participation is regarded as social participation and participation factors are regarded as factors reflecting social constructs. Participation is conceptualized as a kind of social rather than an individual behaviour, and the decision to act is embedded in social context (Courtney 1992). Stalker (1993) has revealed the involuntary aspect of participation brought about by social pressure for norms compliance in the workplace. Empirical tests on subjective norms (social pressure) and personal norms (felt obligations) have been conducted by Pryor (1990), and Yang *et al.* (1994), among others.

In Pryor's (1990) study, both participation intenders and non-intenders are included for examination. However, the major explanatory analysis (based on reasoned action) focused on predicting intenders only. Although the differences between intenders and non-intenders are presented, they are restricted for descriptive purposes.

The study of Yang *et al.* (1994) considers both participants and non-participants and discriminant analysis is employed to distinguish between the two groups. Although the study claims that the results confirm the significance of the social-psychological behavioural model in discriminating participants and non-participants, of all the factors tested, only the 'intention to participate' factor is found significant. The attained significant level of *the other factors*, however, do not reach the standard of meaningful difference in discriminant statistics (see Rencher 1992 and Hair *et al.* 1995). Moreover, there exists the difficulty in confirming the difference between participants and non-participants. The problem comes from the only significant variable 'intention to participate'. This variable runs the risk of collinearity with the act of participation (in model specification) because they together build up a circular argument.

Notwithstanding the inconclusive data regarding the differences between participants and non-participants, the social psychological perspectives are indeed important perspectives in theorizing participation.

### **Scope and methodology**

The scope of this study consists of the perspectives identified in the literature review: motivations, situations, demographic and socio-economic characteristics, personal dispositions, attitudes, beliefs and social norms and pressure.

The scope of this study is confined to a specific respondent group: secondary school teachers in Hong Kong. In Hong Kong, there is an obvious trend of increasing adult participation in higher and continuing education since the early 1990s (Chung *et al.* 1994, Mok 1997). Demographics of participants are quite similar to the UK (Mok 1997), and the motivations of participation and the deterrents to participation are also comparable to the USA and UK (Chan and Holford 1994, Chung 1997). However, studies that chart the profile of participants are scarce and there are no studies in Hong Kong that discriminate the characteristics of participants and non-participants by taking the different perspectives into examination. Due to the several government policies to upgrade teacher qualification (*Education Commission Report No. 5* 1992, *Education Commission Report No. 7* 1997), Hong Kong teachers are one of the major participation groups in continuing education. It is therefore important to understand what the important discriminants are so as to make better use of resources. Studies in the past do not usually account for the selection of respondents. Respondents were either programme-based or locality-based. In our study, the respondents are profession-based rather than programme-based (short- or long-term courses). The selection of respondents in this study deserves some explanation because respondents constitute the scope of the perspectives examined. The selection of a professional group rather than wide-ranging respondent groups potentially limits the number of significant variables in each perspective. (A simple guess is that more diverse respondent groups give more diverse responses to different variables.) The compensation, on the other hand, is that the similar macro social context so funnelled can enhance the testability of perspective variables based on higher commonalities among respondents.

### *Variables*

*Motivations.* The motivational factors analysed in Kwong *et al.*'s (1997) study were employed. Kwong *et al.* studied the motivations of Hong Kong primary school teachers in re-entering higher education, and the motivational factors employed in the study were based on Beder and Valentine (1990), Boshier (1991) and Morstain and Smart (1974). In addition, motivational factors in this study were not exclusively focused on learning. Instead, the generic motivations (not specifically learning-related) of the respondents over the past three years were included. As a result, eight items were derived: motivations for promotion; better communication skills; knowledge acquisition; acquaintance of other teaching professionals; making new friends; making life more interesting; making job more interesting; and motivation for dealing with job requirements/problems.

*Situations.* Situational variables include quite a number of the 'deterrents' cited in Cross (1981) and the life-space/life-growth situational variables suggested by Bergsten (1977) and Super (1984). They are: the existence of rules of seniority and ranking that govern the sequence of staff taking CPE courses; the time allocated to family (or boy/girl friend) and to leisure (recreation, social, and community), the time allocated for job; health status; job workload; family financial load; job satisfaction; ideal job in mind; and job change intention.

*Personal dispositions.* These are: self-evaluation of job ability/performance and study competence (Cross 1981).

*Personal attitudes and beliefs.* Personal attitudes are the personal value perception of CPE and the perception of whether workers need to continue to study (Cross 1981). Personal beliefs are perceptions of the outcome consequences (Ray 1981) of CPE in enhancing knowledge acquisition, communication skills acquisition, skills application, self-potentials discovery, job performance, and job change. These beliefs are based on personal experience and information.

*Social norms and pressure.* These include the normative social beliefs obtained from respondents' reference groups regarding participation in CPE (Yang *et al.* 1994). The normative social beliefs extend from encouragement to instruction regarding participation in CPE. There were four reference groups in this study: superiors, close friends, family members and spouse or girl/boy friend. They also include the perception of pressure from having colleagues, and closer colleagues and friends taking courses, and the perception of pressure as a result of colleagues' educational and professional qualifications (Stalker 1993).

*Demographic and socio-economic characteristics.* These include sex, age, educational qualification, income, marriage, children, job rank and working experience. Although some of the factors such as rank, children etc. can be regarded as situational variables, the common theoretical understanding relates such variables to the sociological perspectives rather than to the psychological perspectives. In this study, we adopted the traditional delineation.

*Participation.* Participants were defined as those who in the last three years had participated or were participating in continuing professional courses. Courses were limited to those that lasted for at least one year with a qualification awarded at the end of the course. Short courses were not counted, so as to reveal the strength of the various factors of the studied perspectives, such as the devoting of time and money by the learner and the encouragement and support of friends and employers. Non-participants were those who had not attended any such courses in the past three years, and intenders were those who had considered taking such courses but finally failed to register. Secondary school teachers were the target respondents. In Hong Kong there are many part-time in-service courses for the betterment of teachers in their teaching profession. Such courses, which are usually offered by universities and colleges, offer qualifications recognized by the government.

### *Measurement of variables*

For questions measuring motivations, personal disposition, personal attitudes and beliefs, social norms and pressure, 4-, 5- or 6-point Likert scales were used, with high scores for high intensity values and low scores for low intensity values. For example:

*Personal beliefs.* 'Based on your past experience and information, do you believe that CPE is helpful in enhancing personal knowledge?', answer values ranged from 6 (very helpful) to 1 (not helpful).

*Social norms and pressure.* 'Has/have your boss(es) encouraged you to take CPE courses?', answer values range from 5 (instructed to take CPE), 4 (suggested to take CPE), 3 (no special idea), 2 (suggested not to take CPE), to 1 (instructed not to take CPE).

*Workload.* 'Your workload is...', answer values range from 4 (very heavy), 3 (quite heavy), 2 (average), to 1 (not heavy).

Alpha coefficients are acceptable. For motivational factors the alpha coefficient is 0.73, 0.63 for dispositions, 0.77 for attitudes, 0.85 for beliefs, and 0.50 for social pressure.

Demographic and socio-economic variables were either coded as interval scales (e.g. income and age) or dummies (e.g. sex and marriage) (Huberty 1994, Hair *et al.* 1995).

### Respondents and return rate

Twenty-five schools were randomly selected from a total of 442 secondary schools in Hong Kong in the 1996–97 school year (international schools excluded). Two schools declined the research invitation and two schools were randomly selected for replacement. All the teachers in the selected schools were invited to fill out a questionnaire. Completed questionnaires were returned to the researchers by mail or by mass collection via the school office. There were 1,364 questionnaires sent out and 845 questionnaires were returned giving a response rate of 61.95%. Upon checking, 6 questionnaires were unusable. Out of the 839 respondents, 371 were participants, 422 were non-participants and 46 were intended-participants.

Participants and non-participants were entered for discriminant analysis as the proportion was satisfactorily balanced. Intenders were excluded from analysis as the number was devastatingly out of balance. Hence, the final number of respondents used in the analysis is 787. Multiple discriminant analysis of the SPSS programme was utilized.

### Findings

All the variables of the perspectives are entered in discriminant analysis to detect their relative importance in discriminating participants and non-participants and in predicting participation. Results are shown in table 1. Discriminant loadings rather than discriminant coefficients are reported because of their stability (Rencher 1992, Hair *et al.* 1995). Variables with significant loadings above  $\pm 0.3$  are considered meaningful. To confirm the group prediction accuracy, the classification accuracy is set at 1.25 times the maximum chance criterion (Hair *et al.* 1995). The variance explained is high at 53.8% and the classification accuracy is substantially higher than the maximum chance criterion showing that the prediction accuracy is confirmed.

For the motivations domain, almost all of the motivational variables are significant but with only three showing meaningful discriminant loadings. Interestingly enough, participants are stronger in the motivation of seeking job promotion while non-participants are stronger in the motivations of making job more interesting and making



life more interesting. Non-participants seem to be more interested in their life. Because 'making job interesting' is significant side by side with 'making life interesting', we can conclude that non-participants consider job as part of their life (Bergsten 1977). Non-participants are probably settling down at that stage of their lives and focus more on the content of their work and their life.

For the perspective of situations, many of the situational variables are not significant. Among the significant variables, participants spend more time in leisure, social and community activities and they are healthier. Non-participants are characterized by having a heavier family financial load. Although these factors make sense in discriminating between participants and non-participants, they are not meaningful (statistically) because the difference is rather small. As has been mentioned, this single professional group so selected is embedded in a very similar macro social context and this social context is revealed here: the teacher professionals share a lot of similarities in work nature, work load, and time spared for other personal and social activities. In other words, this perspective is found highly influenced by the social context of secondary teachers in Hong Kong and the situational variables are not good predictors or discriminants of teacher participants and non-participants.

The perspectives of dispositions, attitudes and beliefs are grouped together as they are under the field of psychology. The results show that they are not good discriminants of teacher participants and non-participants. Dispositions are insignificant, teachers generally indicate they can do quite well to cope with their learning and teaching. For beliefs and attitudes, the results show that participants generally have a more positive attitude and belief in CPE, however, the difference is again small. This probably indicates that teachers, being professionals in education, have shared values regarding CPE.

The perspectives of social norms and pressure are also not useful in distinguishing teacher participants and non-participants. The significant but not meaningful variables show that participants, although influenced by close friends or spouse or girl/boy friends not to take CPE, they took CPE. Non-participants, although they indicated that they had friends and colleagues taking CPE, they chose not to take CPE. These two groups indicate a rather odd picture. However, the analysis further shows that perception of pressure (in comparing educational qualification with friends and colleagues) is not a significant discriminant between the two groups. This indicates that participants and non-participants' decisions are self-determined rather than other-determined, particularly because the difference between the two groups is so small and not meaningful.

The socio-economic perspective is quite good in the discriminant result. There are several significant variables and two of them are meaningful and the significant variables have higher values than the significant variables of the other perspectives. The picture shows that non-participants are characterized by higher income, more working experience, higher educational qualification and higher job rank; they are also older in age, married, and have children. The only two meaningful variables are income and working experience – they are characteristics of non-participants.

In considering the whole discriminant function, over one-third of the variables are not significant and only five of the significant ones are meaningful. They are: motivation to make job more interesting; motivation to make life more interesting; motivation for job promotion; income; and working experience. These discriminants indicate that participants are more concerned about job promotion, while non-participants are more motivated to make their life and job interesting, and they generally have a higher income and more working experience. The results also indicate

**Table 1. Discriminant analysis results for participants and non-participants.**

Canonical Discriminant Function					
Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-square	df	Sig
1.1637	.7334	.4622	401.727	43	.0000
Group Classification Results					
	Cases	Predicted Group Membership		Non-participants	
		Participants		Non-participants	
Participants	226	190 (84.1 %)		36 (15.9 %)	
Non-participants	318	34 (10.7 %)		284 (89.3 %)	
Percent correctly classified: 87.1 %					
Maximum chance criterion: 59.0 %					
Group Centroids					
Participants	- 1.28				
Non-participants	.91				

Domains/Variables	Wilks' Lamda	Discriminant Loadings	Rank
Motivations			
1. to make job more interesting	.70	.61	1
2. to make life more interesting	.70	.60	2
3. to make new friends	.99	.11	
4. to acquaint teaching professionals	.99	-.08	
5. for better job fulfilment	n.s.		
6. for better communication skills	n.s.		
7. for job promotion	.83	-.42	3
8. for acquiring knowledge	.97	-.16	
Situations			
1. time for work	n.s.		
2. time for leisure/social/community	.97	-.17	
3. time for spouse or girl/boy friend	n.s.		
4. family financial load	.98	.12	
5. job workload	n.s.		
6. health status	.99	-.10	
7. job satisfaction	n.s.		
8. have a better job in mind (yes/no)	n.s.		
9. hoping for a job change	n.s.		
10. are there workplace requirements for only senior & qualified staff to take CPE? (yes/no)	n.s.		
Dispositions			
1. self-evaluation of learning ability	n.s.		
2. self-evaluation of job performance	n.s.		

Attitudes			
1. personal perception of the necessity of CPE to workers	.97	– .17	
2. personal perception of the value of CPE	.99	– .11	
Beliefs of CPE			
1. in knowledge enhancement	.97	– .16	
2. in skills enhancement	.98	– .12	
3. in discovering self-potential	.98	– .12	
4. in enhancing job performance	n.s.		
5. in enhancing communication	.99	– .08	
6. in job change	n.s.		
Social Norms & Pressure			
1. boss' encouragement/instruction to study	n.s.		
2. close friends' encouragement/instruction to study	.98	– .13	
3. family/siblings' encouragement/instruction to study	n.s.		
4. spouse/girl/boy friends' encouragement/instruction to study	.98	– .13	
5. proportion of colleagues studied or studying CPE	.98	.13	
6. close friends/colleagues have CPE in last 3 years (yes/no)	.96	.13	
7. perception of pressure to consider CPE (based on friends & colleagues' qualification)	n.s.		
Socio-Economic Status (SES)			
1. income	.87	.36	4
2. working experience	.87	.36	4
3. age	.93	.26	
4. marriage (yes/no)	.93	.25	
5. sex	n.s.		
6. number of children	.95	.22	
7. education	.99	.11	
8. job rank	.97	.16	

that many of the perspectives and variables are not significant or meaningful in distinguishing between teacher participants and non-participants and in predicting participation.

Conclusion

The literature shows a number of postulated factors and perspectives in explaining participation in education. The results of this study, however, indicate that only a limited number of factors and perspectives are effective in distinguishing teacher participants and non-participants and in predicting participation. Such a conclusion is

not exclusive to this study. It has also been implicitly presented in Henry and Basile's (1994) study in which only six variables are found significant in the odds of participation.

Of the five variables that are found significant and meaningful in this study, three are from motivations and two are from the socio-economic perspectives. These two perspectives have been identified in very early research work that examined participation. Their importance is further verified in this study despite so much diverse development that has been established in the field.

However, it is quite surprising that participants are found to be relatively focused on the motivation for promotion. This implies that teachers seeking CPE are rather narrow in their orientations but acute in that very orientation. On the other hand, non-participants are more motivated to look at their own life than their career. Probably they are reaping the benefits of their past long working experience and are now enjoying a relatively higher income. They care more about the meaning of their life and their work.

When taking into consideration the various perspectives, it can be concluded that the situational and dispositions perspectives are not effective in distinguishing between teacher participants and non-participants. The perspectives of attitudes and beliefs show that although participants hold a stronger and more positive stance toward CPE, the difference is not powerful. In terms of the perspectives of social norms and pressure, participants and non-participants are not much differentiated either. The results show that they are rather self-directed in their decision of taking or not taking CPE; the influence and pressure of others is not a strong discriminant of the two groups. The perspective of socio-economic characteristics generally shows that non-participants have higher scores on all the variables. Generally speaking, because the loadings in the perspectives of situations, attitudes, beliefs and social pressure are very low, it can be concluded that the effect of these perspectives on participation in CPE is limited, if not rejected. More concentration on the perspectives of motivations and the sociological perspectives would be appropriate for the teaching profession.

This study shows the relative significance of the major perspectives in distinguishing between participants and non-participants and in predicting participation. The results show that both participants and non-participants have to be examined simultaneously, otherwise the postulated relationship might be biased or wrongly inferred (for example, non-participants do not have lower factor values in attitudes, beliefs, motivations etc. nor are non-participants deterred by time, work, and financial load etc.). Accordingly, this study reveals that all of the variables are actually applicable to both participants and non-participants.

However, because of the scope of this study, the findings have to be interpreted carefully. In this study, several of the perspectives were somehow controlled because of the single professional group being examined. This study is therefore heavily specific in social-context. Teaching professionals are quite similar in their educational background and in teacher entrance qualifications. Their job nature is very similar in terms of workload and time use. Their pay and promotional prospects are rather fixed and framed in certain scales. Being in the same profession, teachers probably have similar attitudes and beliefs towards CPE. Their outlook on job prospects and job satisfaction shows few differences. All these have probably reduced the difference between participants and non-participants on a number of variables and perspectives and have reduced the power of these perspectives in predicting participation. If the respondents were from different occupations or from more diverse socio-economic background, the results might have been very different. Further, since this study is based only on the

participation history of the respondents over the past three years, it is quite possible that the full picture has not emerged. Although this study has not been effective in detecting the relative weights of different perspectives across diverse population groups, it does point out that certain participation perspectives may not have strong effects in predicting participation.

Further, this study suggests to supervisors and educators in CPE that teacher participants and non-participants in CPE do not differ in many aspects. Supervisors and educators should therefore be more focused in their participation promotion efforts. They should avoid wasting time on unimportant factors such as enhancing subjective and objective norms in the school or the strengthening of disposition. Instead, as a response to the motivations of making life and work more interesting, continuing education providers should cultivate a different set of beliefs and attitudes toward teacher CPE by developing a different type of CPE.

Chambers (1992), in reviewing the continuing education of dentists, has this remark :

if we have defined continuing dental education as extending the knowledge base of universities to the practitioner, we are in the wrong business. (p. 673)

Chambers (1992) remarks that viewing CPE as knowledge extension and regarding CPE schools as superior, are irrelevant to practitioners. Practitioners aim at customers and not at knowledge extension. What is essential is a closer understanding of what practitioners need in order to make them successful in terms of the benefits to their clients, and not the issuance of certificates by CPE institutions. CPE should be viewed as an information exchange system of creating and maintaining networks of communication among professionals. Such networks are important to enhance one's personal status and relationships with others. They are important in establishing support and enhancing decision-making through wider information gathering and exchange of ideas.

In other words, the beliefs about CPE may need to change from 'talking to' to 'talking with'; from few, large, fixed, formal, *ad hoc* education models to many, customized, personal and long-term relationships (Chambers 1992).

In this study, it is found that non-participant teachers, do not possess higher values than participants in their beliefs in CPE (although the difference is small). It is likely that their past experience had led them to this conclusion: that a 'talking to' type of knowledge extension and motivation for the sake of promotion and certification, have rendered their learning extrinsic and not personally meaningful and valuable. Non-participant teachers care about their life, they also care about their teaching work. What they need is something to enhance such values, not to enhance job promotion. Based on this argument, CPE providers have to promote the message that the aim of CPE is to help practitioners to make their jobs more interesting. This is probably through a kind of 'talking with' and networking format where practitioner-client and practitioner-practitioner relationships are encouraged.

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