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To cite this article: Te-Sheng Chang , Huei-Hsuan Lin & Mei-Mei Song (2011) University faculty members' perceptions of their teaching efficacy, Innovations in Education and Teaching International, 48:1, 49-60, DOI: [10.1080/14703297.2010.543770](https://doi.org/10.1080/14703297.2010.543770)

To link to this article: <https://doi.org/10.1080/14703297.2010.543770>



Published online: 03 Mar 2011.



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University faculty members' perceptions of their teaching efficacy

Te-Sheng Chang^{a*}, Huei-Hsuan Lin^a and Mei-Mei Song^b

^a*Department of Curriculum Design and Human Potentials Development, National Dong Hwa University, Taiwan;* ^b*Graduate Institute of Futures Studies, Tamkang University, Taiwan*

The purpose of this study was to investigate faculty members' perceptions of teaching efficacy and their relation to faculty members' backgrounds. A questionnaire measuring six dimensions of teaching efficacy was distributed to faculty members at 17 universities in Taiwan, yielding 513 complete sets of responses. Faculty members felt efficacious, from the greatest to the least, in the following dimensions: course design, class management, interpersonal relation, learning assessment, technology usage, and instructional strategy. Faculty members of public universities show higher perceptions of their efficacy than do those of private universities. Faculty members in education report a higher level of efficacy than faculty members in other disciplines. Females score higher than males in class management and learning assessment. Faculty members with less than six years of teaching experience indicate lower perceptions of teaching efficacy in course design than other faculty members. Faculty members teaching courses completely matching their specialties feel more confident in their teaching than those teaching partially-matched courses. However, there is no significant difference between faculty members with teaching training and those without training experience.

Keywords: university faculty members; university teaching; teaching efficacy

Introduction

Teaching efficacy refers to 'a judgment about capabilities to influence student engagement and learning' (Woolfolk Hoy, 2004, p. 1). Teachers' perceptions of teaching efficacy have a positive influence on teaching performance and students' learning achievement (Ross, 1994). In addition, teaching efficacy, a teacher's belief in how effective her/his teaching is, informs her/his behavior in the classroom; that is, a teacher with a strong sense of efficacy about her/his ability to teach tends to demonstrate a greater level of enthusiasm, preparation, and organisation for teaching (Allinder, 1994). Pedagogically speaking, this type of teacher is more experimental and persistent in dealing with difficulties emerging from teaching (Bandura, 1997; Ross, 1994).

There are now a number of studies that have analyzed teacher perceptions of teaching efficacy. However, most of these studies have mainly focused on the elementary and secondary school teachers (e.g., Hutchinson, 1998; Lin & Correll, 2001) and little is known about the teaching efficacy of university teachers (Cook, 1998). This study attempts to add to the study of efficacy theory in higher education by delving into

*Corresponding author. Email: achang@mail.ndhu.edu.tw

university faculty members' sense of teaching efficacy and its relation to faculty members' backgrounds in Taiwan.

In Taiwan, teaching, compared to research, has been undervalued among universities, particularly public universities. Public universities by and large are perceived as more research-intensive and 'desirable' as places to learn and to work. When students choose which schools to attend, or when professors consider universities for employment, they tend to prefer public universities to private ones. In order to compete with public universities, a lot of private universities, which used to recruit students by emphasising their teaching quality, have started asking their faculty members to spend more time and effort in doing research work.

In order to promote teaching quality in universities, the Ministry of Education in Taiwan in 2004 made a policy titled 'Teaching Excellence Plan' which encouraged the teaching centres within universities to provide teaching programmes/workshops for their faculty members. The present study was carried out in 2006.

Concepts of university teaching

Many researchers have defined a number of different conceptions of university teaching concepts of university. For example, Brown (1993) suggested that the meaning of teaching encompasses course design, class management, teacher-student interaction, the provision of other learning opportunities, assessment and feedback to students. The provision of other learning opportunities could be related to the use of media, such as the use of computer-assisted learning or tape slide programmers.

Gow and Kember (1993) applied the analytic categories derived from their own interviews to construct a questionnaire on conceptions of teaching. Their questionnaire contained nine subscales which were: training for specific jobs, imparting information, knowledge of subjects, greater use of media, problem solving, motivator of students, facilitative teaching, interactive teaching, and pastoral interest. The first three subscales were related to knowledge transmission while the rest of them were related to learning facilitation (Norton, Richardson, Hartley, Newstead, & Mayes, 2005, p. 549).

Mainly adopting the definition of teaching by Brown (1993) and refining the dimensions of teaching by Gow and Kember (1993), this study resulted in a framework, for university teaching, which contained six dimensions under the two categories of knowledge transmission and learning facilitation. Table 1 indicates the relation among the concepts/dimensions of teaching defined by Gow and Kember (1993), and Brown (1993) and those used in this study.

Teaching efficacy

Teaching efficacy can be grounded in Bandura's (1997) social cognitive and self-efficacy theories. Self-efficacy has been defined as 'people's judgments of their capabilities to organise and execute courses of action required to attain designated types of performances' (Bandura, 1986, p. 31). Self-efficacy is a key concept in Bandura's social cognitive theory. It indicates that behaviour is best understood in terms of a triadic reciprocal system. The triadic reciprocal system consists of three components – cognition, environment, and behaviour (Bandura, 1986). Reciprocal determinism refers to the notion that cognition (perceived ability to perform the task), environment

Table 1. The dimensions of university teaching by different studies.

Gow and Kember (1993)	Brown (1993)	This study
Knowledge transmission		
Training for specific jobs	Course design	Course design
Imparting information		
Knowledge of subjects		
Learning facilitation		
Problem solving		Instructional strategy
Motivator of students		
Use of media	Use of media	Technology usage
Facilitative teaching	Class management	Class management
Pastoral interest	Teacher–student interaction	Interpersonal relation
	Assessment and feedback to students	Learning assessment

(the setting), and behaviour (the task being performed) are bidirectional and interact dynamically. That is, people reflect on their own beliefs about performing tasks in specific situations, known as self-efficacy (Bandura, 1986).

Based on Bandura’s theory of self-efficacy, it is inferred that teacher performances reciprocally influence and are influenced by personal factors as well as their perceptions of the factors in the environments in which they teach. Cook (1998) emphasised that ‘teaching efficacy is not an observable behavior, but rather an individual belief’ (p. 14). When a teacher makes an efficacy judgment, it is necessary for him/her to assess his/her strengths and weaknesses in relation to the requirement of the task at hand.

Method

The measure

The instrument used in this study was the Faculty Teaching Efficacy Questionnaire (FTE) which consisted of the six factors derived from the literature discussed earlier. The FTE questionnaire was composed of 28 four-point-Likert items derived from our own interviews. As indicated in Table 2, these items were clustered around six factors, including efficacy for course design, technology usage, instructional strategy, class management, interpersonal relation, and learning assessment. The sum of these factors was considered to be a total score. The exemplar item for each factor is shown in Table 2.

Factor loadings for items designed to measure each factor were consistently large, between .58 and .88. The six factors accounted for 73.59% of the total variance. The coefficients of internal consistency reliability for course design, instructional strategy, technology usage, class management, interpersonal relation, learning assessment, and the total scale were .91, .88, .93, .90, .86, .87, and .95, respectively.

Participants

The questionnaire was mailed to a random sample of 100 faculty members from each of nine public universities and eight private universities in Taiwan between May and

Table 2. The exemplar items from the faculty members' teaching self-efficacy questionnaire.

Dimension	# of items	Exemplar items
Course design	5	I believe I can select appropriate teaching material.
Instructional strategy	5	I have confidence in inspiring and maintaining students' learning motivation.
Technology usage	5	I believe I can utilise technology to enhance my teaching.
Class management	5	I believe I can nurture a pleasant learning environment.
Interpersonal relation	3	I believe I can listen to my students in order to understand their thoughts.
Learning assessment	5	I believe I can utilise a variety of assessment methods to evaluate students' learning results.

Table 3. The summary of sample demography ($n = 513$).

Background		Public		Private		Missing		Total	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Gender	Male	143	63.3	186	70.7	12	50.0	341	66.5
	Female	82	36.3	77	29.3	11	45.8	170	33.1
	Missing	1	.4	0	0	1	4.2	2	.4
Course matching	Completely	128	56.6	141	53.6	10	41.7	279	54.4
Specialty	Partially	96	42.5	120	45.6	13	54.2	229	44.6
	Missing	2	.9	2	.8	1	4.2	5	1.0
Training	Untrained	91	40.3	73	27.8	10	41.7	174	33.9
	Trained	135	59.7	190	72.2	14	58.3	339	66.1
Years of teaching	< 6	35	15.5	70	26.6	4	16.7	109	21.2
	6–10	39	17.3	71	27.0	6	25.0	116	22.6
	11–15	51	22.6	43	16.3	5	20.8	99	19.3
	16–20	38	16.8	24	9.1	3	12.5	65	12.7
	> 20	63	27.9	55	20.9	6	25.0	118	24.1
Disciplines	Education	59	27.8	2	.8	0	0	61	13.3
	Humanities	54	25.5	68	27.6	1	4.2	122	26.6
	Science	59	27.8	88	35.8	3	12.5	147	32.1
	Medicine	29	13.7	35	14.2	0	0	64	14.0
	Business	11	5.2	53	21.5	0	0	64	14.0
	Missing	14	6.2	17	6.5	20	83.3	51	9.9
Total		226	44.1	263	51.3	24	4.6	513	100

July of 2006. The response rates were 25.1% for public faculty members, 32.9% for private faculty members, and 30.2% for the total. The sample varied on a range of demographic factors as shown in Table 3.

Analytic strategy

The means and standard deviations were calculated for the teaching efficacy variables. An independent *t* test was performed to test the mean differences in teaching efficacy scores across faculty members' type of institution, gender, training received, and

course matching their specialty. A one-way analysis of variance was performed to assess whether faculty members' teaching efficacy was related to their years of teaching and academic disciplines.

Results and discussion

Scores from all respondents

Table 4 presents the means and standard deviations of the dimension and total scores obtained by all respondents. The ranges of the means of teaching efficacy dimensions are 3.13 to 3.58. In a 4-point scale, a mean score above 2.5 (the average of the 4-point scale) could be interpreted as high. The orders of means from high to low for these six dimensions are course design, class management, interpersonal relation, learning assessment, technology usage, and instructional strategy. The average of the total score is 3.32, which could be regarded as 'high' as measured on the scale.

A few observations are worthy of mention. First, this study corresponds with the findings of Chang's (2005) study on students' ratings of instruction. According to Chang (2005), students are most satisfied with what teachers teach, while least satisfied with how teachers teach. This study finds that teachers are most confident in course design and least satisfied in instructional strategy. The correspondence between how university students perceived professors' instruction and how professors perceive their own abilities to teach might suggest that in general teachers are aware of how their students feel about their teaching. That awareness, in turn, may shape their own sense of teaching efficacy.

Secondly, this study echoes the findings of Norton, Richardson, Hartley, Newstead, and Mayes (2005), on university faculty members' teaching intentions. They found that university teachers' intentions are less oriented toward learning facilitation and more oriented toward knowledge transmission. The findings of Norton et al. could explain to some extent why the faculty members' score is highest on teaching efficacy for course design and lowest for instructional strategy.

Generally, it requires years of academic training for a faculty member to become 'qualified' to teach in universities. Most university faculty members hardly received any training in teaching skills because their universities in the past did not pay special attention to assisting them to teach better. The lack of institutional investment in teaching, coupled with the persistent demands of required academic training and research, might be another explanation for why university professors in Taiwan feel

Table 4. Summary of faculty members' teaching efficacy (N = 513).

Dimension	<i>M</i>	<i>SD</i>	<i>Rank</i>
Course design	3.58	.46	1
Instructional strategy	3.13	.56	6
Technology usage	3.26	.60	5
Class management	3.37	.50	2
Interpersonal relation	3.32	.54	3
Learning assessment	3.25	.49	4
Total	3.32	.40	

Note: A 4-point scale: 4 = Strongly agree; 1 = Strongly disagree.

relatively better prepared for and more comfortable with the course design, while less so with how they manage the class and deliver the course.

Comparison among faculty members with different backgrounds

Tables 5 through 10 depict the means, standard deviations, and statistic test values for faculty members with different backgrounds on each dimension and the total score.

Type of institution. The ranges of scores are, for the public faculty members, between 3.29 and 3.71, and for the private, between 2.97 and 3.45. The public faculty members obtained significantly higher scores than the private faculty members on all dimensions and the total scores.

It is quite common that teaching centres at public universities have difficulties in getting their faculty members to attend teaching training workshops. On the other hand, teaching centres at private universities reported having little problem in getting their faculty members to attend workshops on teaching. Table 3 indicates that the percentage (59.7%) of faculty members of public universities attending workshops on teaching is much less than that (72.2%) of private universities.

The difference of teaching efficacy between faculty members of public universities and those of private universities requires more research on the institutional culture of the public and private universities in Taiwan. The structure and culture of the private universities in Taiwan are more rigid and hierarchical than those of the public universities. The administrators of the private universities tend to be more authoritative and punitive in demanding that their faculty members participate in teaching training programmes/workshops. This might explain why teaching centres of private universities have reported little difficulty in getting faculty members to participate. Many professors consider private universities to be their starting point and public universities permanent posts. Teaching in public universities is perceived to be more 'prestigious' and 'secure'. The perceived hierarchy between the public and the private might be translated into how the levels of teaching efficacy differ between the faculties of public and private universities.

Gender. The ranges of scores are between 3.10 and 3.56 for male faculty members and between 3.18 and 3.60 for female. Female teachers score significantly higher than their male counterparts in class management and learning assessment.

Table 5. Summary of independent *t* test across two types of institutions.

Dimension	Public (<i>n</i> = 226)		Private (<i>n</i> = 263)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Course design	3.71	.39	3.45	.46	6.63***
Instructional strategy	3.29	.51	2.97	.55	6.69***
Technology usage	3.36	.64	3.17	.56	3.57***
Class management	3.52	.49	3.22	.46	6.97***
Interpersonal relation	3.43	.53	3.21	.53	4.70***
Learning assessment	3.38	.51	3.12	.43	6.27***
Total	3.45	.40	3.19	.37	7.55***

Note: ****p* < .001.

Table 6. Summary of independent *t* test by gender.

Dimension	Male (<i>n</i> = 341)		Female (<i>n</i> = 170)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Course design	3.56	.45	3.60	.46	-.88
Instructional strategy	3.10	.54	3.18	.58	-1.58
Technology usage	3.28	.58	3.22	.64	1.16
Class management	3.33	.48	3.43	.52	-2.23*
Interpersonal relation	3.29	.53	3.37	.55	-1.64
Learning assessment	3.21	.45	3.31	.54	-2.28*
Total	3.30	.39	3.35	.43	-1.49

Note: **p* < .05.

The findings of this study correspond to the findings of Norton et al. (2005). Norton et al. found that female professors were more likely to hold a conception of teaching as learning facilitation. Similarly, female professors in this study feel more confident than their male counterparts in the areas of class management and learning assessment. Culturally, Taiwanese society tends to demand that females be caring and attentive. This cultural expectation seems to be played out in university classrooms though many professors and students are aware of, and in some ways try to defy, this expectation. Nonetheless, female professors by and large feel more comfortable with their ability to manage students.

With regard to assessment, female professors tend to expend more effort in constructing course syllabuses and have more detailed descriptions regarding every aspect of the course, particularly assignments and assessment. This might explain why they feel more comfortable with their capacity to assess students' performances. And certainly if they feel that they are more involved with students, they might also feel that they have more foundation for gauging how and what students learn.

Courses matching faculty members' expertise. The ranges of scores are between 3.19 and 3.66 for completely-matched faculty members and between 3.05 and 3.48 for partially-matched faculty members. With the exception of the dimensions of technology usage and interpersonal relation, the scores of completely-matched faculty members are significantly higher than those of partially-matched faculty members.

A related observation on teaching efficacy addresses the degree to which a professor's specialty matches the courses that he/she offers. Understandably when a professor perceives that the parameters of a course fall within his/her specialised area, his/her level of self confidence in teaching increases, and vice versa. The challenge is to understand how the statistically significant data make sense in this regard. Does a course, such as introduction to sociology, need to be taught by some one holding a PhD in sociology? That is not necessarily what this research result indicates. Teaching efficacy is about 'perception', i.e., how a teacher perceives how capable he/she is as an effective teacher. In other words, this research examines the 'perceived match' between what teachers understand as the content of a course and what they consider their expertise. A professor with a degree in building and planning or local studies might be perfectly eligible and feel confident to offer courses in sociology or even

Table 7. Summary of independent *t* test by degree of courses matching teacher specialties.

Dimension	Completely-matched (<i>n</i> =279)		Partially-matched (<i>n</i> =229)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Course design	3.66	.43	3.48	.44	4.65***
Instructional strategy	3.19	.57	3.05	.54	2.72**
Technology usage	3.30	.61	3.23	.58	1.40
Class management	3.42	.50	3.31	.49	2.54*
Interpersonal relation	3.34	.55	3.29	.53	1.24
Learning assessment	3.29	.50	3.19	.46	2.35*
Total	3.37	.41	3.26	.39	3.14**

Note: **p* < .05; ***p* < .01; ****p* < .001.

anthropology, as long as he/she perceives high compatibility between the course and his/her areas of study and interest.

However, in Taiwanese universities professors often find themselves in a situation where they are 'assigned' to teach (particularly required) courses. These assigned teaching arrangements usually are made due to lack of staff, not necessarily because of faculty members' expertise. When this happens, professors tend to feel less comfortable with the course materials and resistant to (and very likely less enthusiastic about) the 'obligated' teaching assignment. As their teaching efficacy decreases, their students are usually keen to observe and take notes on the unfortunate situation.

Participation in training programmes. The ranges of efficacy scores are between 3.08 and 3.60 for untrained faculty members and between 3.15 and 3.56 for trained faculty members. There is no statistical difference between these two groups regarding their scores on teaching efficacy.

It is generally assumed that university teachers would benefit from their participation in formal teaching training programmes (Coffey & Gibbs, 2000). Coffey and Gibbs found that teachers' participation in training programmes led to significant improvements in the student ratings of their instruction. This study, however, does not support the assumption that faculty members' participation in teaching programmes would score higher than those without participation. One possible explanation is that

Table 8. Summary of independent *t* test for trained and untrained teachers.

Dimension	Untrained (<i>n</i> =173)		Trained (<i>n</i> =337)		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Course design	3.60	.47	3.56	.44	.92
Instructional strategy	3.08	.58	3.15	.54	-1.52
Technology usage	3.22	.68	3.29	.56	-1.26
Class management	3.31	.52	3.39	.48	-1.81
Interpersonal relation	3.28	.55	3.34	.53	-1.26
Learning assessment	3.21	.51	3.26	.47	-1.17
Total	3.28	.42	3.33	.40	-1.33

the teaching programmes provided in the universities usually only lasted three hours which were too short to provoke salient improvements on teaching behaviour (Dunkin, 1991). Another possible explanation is that teaching and training programmes have been undervalued by universities in these research-oriented days. Therefore, teacher training might not be able to enhance teachers' sense of teaching efficacy when they are not clear about their teaching responsibilities or feel it to be less important than teaching. This could lead to future research focused on the effect of training programmes on the improvement in teachers' actual teaching efficacy and the changes in their sense of teaching efficacy.

Teaching experience. Faculty members with five or fewer years of teaching experience show lower efficacy scores in course design than those in other levels. Faculty members with 21 or more years of teaching experience have higher scores in instructional strategy and learning assessment than those with five or fewer years of experience. Faculty members with teaching years between 16 and 20 show higher efficacy scores in learning assessment and the overall efficacy than faculty members with five or fewer years.

It is generally assumed that teachers' sense of teaching efficacy will develop with increasing teaching experience. This study provides some evidence that teachers' sense of teaching efficacy in course design, instructional strategy, and learning assessment develops with increasing teaching experience. Generally, it requires years for a new faculty member to get familiar with knowledge transmission and learning facilitation. It seems that most of the new faculty members in this study are learning about teaching by teaching, specifically in the areas of course design, instructional strategy, and learning assessment. On the other hand, for the experienced professors these are the areas which they reported as their strongholds. This certainly points to the importance of creating opportunities where experienced and junior faculty members can engage in dialogue.

Academic discipline. Education faculty members score the highest in all six dimensions and, consequentially the highest in the overall score. They demonstrate statistically higher scores than business faculty members in instructional strategy, class management, learning assessment, and the total score. They also have higher scores

Table 9. Summary of analysis of variance across five levels of teaching experiences.

Dimension	Below 6 (n = 109)		6–10 (n = 116)		11–15 (n = 99)		16–20 (n = 65)		Above 20 (n = 118)		F	Post hoc
	M	SD	M	SD	M	SD	M	SD	M	SD		
Course design	3.40	.47	3.58	.44	3.60	.44	3.73	.38	3.63	.44	7.00***	Y2 Y3 Y4 Y5 > Y1
Instructional strategy	2.97	.61	3.10	.58	3.13	.53	3.17	.49	3.27	.50	4.45**	Y5 > Y1
Technology usage	3.28	.59	3.24	.56	3.30	.64	3.27	.60	3.23	.63	.25	
Class management	3.26	.48	3.37	.52	3.33	.47	3.49	.49	3.41	.50	2.59	
Interpersonal relation	3.19	.55	3.37	.55	3.34	.51	3.43	.53	3.31	.53	2.51	
Learning assessment	3.09	.44	3.28	.50	3.25	.47	3.37	.49	3.29	.49	4.17**	Y4 > Y1 Y5 > Y1
Total	3.20	.40	3.32	.41	3.32	.39	3.41	.36	3.36	.41	3.56**	Y4 > Y1

Note: Y1= below 6 years, Y2 = 6–10 years, Y3 = 11–15 years, Y4 = 16–20 years, Y5 = above 20 years.
p* < .01; *p* < .001.

Table 10. Summary of analysis of variance by academic disciplines.

Dimension	Education (<i>n</i> = 61)		Humanities (<i>n</i> = 122)		Science (<i>n</i> = 147)		Medicine (<i>n</i> = 64)		Business (<i>n</i> = 64)		<i>F</i>	Post hoc
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Course design	3.63	.46	3.59	.44	3.58	.45	3.51	.46	3.54	.47	.69	
Instructional strategy	3.36	.45	3.19	.55	3.05	.55	3.09	.60	2.99	.56	4.94**	E > S E > B
Technology usage	3.36	.66	3.03	.64	3.38	.50	3.39	.55	3.12	.68	7.87***	E > H
Class management	3.57	.46	3.42	.51	3.31	.48	3.33	.55	3.22	.43	5.12***	E > S E > B
Interpersonal relation	3.51	.47	3.30	.54	3.23	.56	3.27	.61	3.31	.42	3.28*	E > S
Learning assessment	3.43	.49	3.23	.50	3.26	.45	3.26	.51	3.15	.43	3.07*	E > B
Total	3.45	.39	3.30	.43	3.30	.39	3.31	.42	3.22	3.52	3.51**	E > B

Note: E = Education, H = Humanities, S = Science, M = Medicine, B = Business.

* $p < .05$; ** $p < .01$; *** $p < .001$

than science faculty members in instructional strategy, class management, and interpersonal relation. In addition, they have a higher score than humanities faculty members in technology usage.

Generally, university teachers use teaching methods that reflect the epistemological assumptions of their different disciplines. Even when using the same teaching methods (e.g. group discussion), teachers in different disciplines seem to adopt different approaches to teaching (Behr, 1988). Teachers in different disciplines have undergone a different process of socialisation as teachers and as a result may have acquired a different sense of teaching efficacy. It is not surprising that teachers in education score the highest in all dimensions and overall. They are teachers' teachers expert in teaching and learning.

The study of Norton et al. (2005) found that science teachers produced higher scores than teachers in other fields on their teaching concept of technology usage. This study does not support their conclusion. Obviously, the teachers' teaching concept investigated in their study is different from the faculty members teaching efficacy investigated in this study.

As discussed earlier, a teacher's sense of teaching efficacy could be affected by the context in his/her discipline and his/her own personal characteristics, such as teaching style. It will be interesting to investigate the relationship of the teachers' teaching concept, the discipline context, and personal characteristics on teaching efficacy in the future.

Conclusions and implications

This study has confirmed that the faculty members feel more efficacious in course design than in instructional strategy (Chang, 2005). Faculty members felt efficacious, in order of importance, in the following areas: course design, class management, interpersonal relation, learning assessment, technology usage, and instructional strategy. Course design, the main part of knowledge transmission, is associated with teachers' knowledge of their subject. The rest of the dimensions in this study are associated with learning facilitation. Instructional strategy has been considered the main part of learning facilitation. However, faculty members report the lowest level of efficacy in this

area. These findings draw attention to the nature and content of teacher training programmes for university faculty members. That is, the instructional strategy in fostering student learning efficacy and motivation could be considered while planning teacher training programmes.

This study has also found some significant differences for faculty members with different backgrounds. In this study, faculty members of public universities, female faculty members, completely-matched faculty members, senior faculty members, or faculty members in the Education discipline have higher efficacy than their counterparts in some or even all dimensions of teaching efficacy. Again, these findings suggest a teaching programme/workshop where teachers with various experiences and different backgrounds share their teaching and learning concerns and insights. This study, however, did not confirm that trained faculty members scored higher than untrained faculty members on their sense of teaching efficacy. This could also be an opportunity for faculty members' development centres to rethink and re-evaluate the content and nature of teacher training programmes in order to meet their faculty members' true needs.

This study has been based upon university faculty members' self-reports of their sense of teaching efficacy rather than upon their actual teaching efficacy. Based on efficacy theory, the latter can be inferred from the former or vice versa (Bandura, 1997). However, Brown and Bakhtar (1988) maintained that teachers' self-reports might not match their real teaching behaviour. In other words, what teachers believe to be their capability in some dimensions of teaching might be at variance with what they are really able to teach. The link between teachers' conceptions of teaching efficacy and their teaching practices could be confirmed by direct observation in future studies.

Acknowledgement

The authors would like to thank the two IETI anonymous reviewers, who made helpful comments on the earlier draft of this article. This research was supported by research grant (NSC-94-2413-H-026-004) from the National Science Council in Taiwan.

Notes on contributors

Te-Sheng Chang is a professor at the National Dong Hwa University in Taiwan, working in the Department of Curriculum Design and Human Potentials Development.

Huei-Hsuan Lin is an assistant professor working with Professor Te-Sheng Chang in the Department of Curriculum Design and Human Potentials Development.

Mei-Mei Song is an assistant professor working in the Graduate Institute of Futures Studies at Tamkang University in Taiwan.

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