Pertanika J. Soc. Sci. & Hum. 1(2): 123-132 (1993)
ISSN: 0128-7702
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Preparation and Training Needs of Teachers to Teach Entrepreneurship in Vocational Programmes

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Keywords: Training needs, teachers, entrepreneurship vocational programmes

ABSTRAK

Tujuan kajian ini ialah untuk mendapatkan persepsi guru-guru mengenai kelayakan dan keperluan latihan guru-guru vokasional untuk mengajar kemahiran-kemahiran keusahawanan. Subjek telah dipilih secara rawak daripada senarai nama dan alamat guru-guru vokasional di Illinois, U.S.A., dan data telah dikumpul melalui soal selidik. Dapatan menunjukkan guru-guru berpendapat bahawa ijazah dalam bidang pendidikan dan pengetahuan dalam bidang pengurusan perniagaan adalah penting untuk melayakkan diri mengajar keusahawanan. Latihan adalah lebih diperlukan untuk mengajar kemahiran-kemahiran yang lebih khusus dan perlukan pengetahuan yang mendalam. Dapatan juga menunjukkan guru-guru yang mempunyai lebih pengetahuan dalam bidang perniagaan dan lebih pengalaman berniaga akan menekankan kemahiran-kemahiran keusahawanan yang penting dalam pengajaran mereka. Kajian ini mencadangkan satu model penyediaan guru yang dapat mempertingkatkan mutu latihan perguruan dalam bidang keusahawanan. Bakal guru-guru keusahawanan hendaklah disediakan dengan sebaik-baiknya melalui kurikulum latihan perguruan yang efektif.

ABSTRACT

The purpose of the study was to identify teachers' perceptions regarding the qualifications and training needs of vocational teachers in relation to teaching entrepreneurial competencies. Subjects were randomly selected from a list of vocational teachers' names and addresses in the State of Illinois, U.S.A., and data were collected by questionnaire. The findings illustrate that educators believe that having a degree in education and having business management knowledge are important qualifications for teaching entrepreneurship. Training is most needed for teaching competencies which are more specialized and require a high level of knowledge. The findings also indicate that teachers who have more business knowledge and more business experience are more likely to emphasize entrepreneurial competencies in their instruction. This study suggests a teacher preparation model that can improve the quality of teacher training in entrepreneurship. Future entrepreneurship teachers should be thoroughly prepared through an effective teacher training curriculum.

INTRODUCTION

The infusion of entrepreneurship education into vocational curricula has been emphasized as the delivery system for self-employment skills (Moesser 1983; Ashmore 1989). Vocational education leaders and programme planners should assess the availability of technical and business skills in existing curricula at the secondary and post-secondary levels (Greenwood 1984). He further suggested that in settings where vocational and technical education occur, it may be necessary to refocus technical and business skill courses toward entrepreneurial competency requirements which address student needs as potential employers rather than employees. Blank and Poole (1987) stated that educators and trainers can ensure that students are presented with entrepreneurship options in their career choices. Students should be encouraged to investigate the possibility of starting new businesses or going to work for small businesses as they plan their educational programmes. Balch (1989) suggested that vocational education should be expanded to include areas of business and management skills that students could use for career enhancement. Ashmore (1989) believed that a new vision of vocational education once infused with the spirit and practicalities of

entrepreneurship, can make vocational programmes the choice of youth and adults who need economic empowerment. She emphasized that the missing link is entrepreneurship education which ought to be part of the curriculum of every vocational programme.

Scanlan (1980) stated that skills in entrepreneurship consist of two components. First, the technical insights that students must possess if they are to be successful entrepreneurs. He believed that the first prerequisite for entrepreneurship education is to make sure that students have the vocational skills necessary to compete in the market place. The second component covers certain managerial skills that entrepreneurs need to learn.

But to address appropriate entrepreneurship instruction, Evans (1987), Buckley *et al.* (1989), and Ashmore (1989) believed that teachers need to be thoroughly prepared. Teacher training efforts should include preparation in the concepts and practices of entrepreneurship. Hill (1986) reported that, upon review of the literature, to teach entrepreneurship was indeed to teach business management. Gleason (1989) noted that not just anyone can teach business management skills. As a president of a small business, he realized that few teachers are adequately prepared to understand all the operations of a company, especially financial management. Daughtery and Ristau (1991) also agreed that the teaching of business management competencies requires proper training. They supported the earlier view of Ely (1984) who stressed that not all teachers can teach business management competencies; competent teachers must be trained and prepared. The overall literature shows that educators must be trained in business management competencies and in the practice of small business in preparing students to be entrepreneurs. It is the consensus that the areas of marketing, management, finance and accounting should be emphasized.

The purpose of the study was to identify teachers' perceptions regarding the qualification and training needs of vocational teachers in relation to teaching entrepreneurial competencies in preparing future entrepreneurs.

This study is important since it provides a teacher preparation model for the teaching of entrepreneurship in vocational education programmes. Considering the importance of entrepreneurial competencies in the Malaysian school system, this study could provide some light on how to improve teacher training effort at Malaysian teacher training colleges and universities.

MATERIALS AND METHODS

Subjects

The subjects under investigation in this study consisted of 190 randomly selected secondary and post-secondary vocational teachers in the State of Illinois, U.S.A. The list of teachers' names and addresses was obtained from the Illinois Board of Education: Department of Adult, Vocational and Technical Education (DAVTE). To determine the sample size, a formula as suggested by Wunsch (1986) was used.

Instruments

The development of the survey instruments began with a thorough review of the literature related to entrepreneurship and entrepreneurship education. The literature provided information that assisted in the development of the survey instrument especially for Part II and III. Those items found most often in the literature pertaining to successful small business ownership, entrepreneurship and entrepreneurial teaching practices were utilized in the formulation of the questionnaire. Part I of the questionnaire collected demographic infomation.

Part II of the questionnaire consisted of a series of 20 statements designed to assess the perception of teachers regarding: (1) the qualifications of entrepreneurship teachers, and (2) the skills needed to be an effective entrepreneur. Respondents selected the appropriate response from a scale as follows: SA - Strongly Agree; A - Agree; N = Neutral; D = Disagree, SD - Strongly Disagree. Part III of the questionnaire consisted of 30 competencies which called for responses on a five - point Likert type scale: 5 = very high, 4 = high, 3 = somewhat, 2 = little, and 1 = very little.

A panel of experts established the content validity of the questionnaire. The panel comprised four entrepreneurship education specialists in Illinois. The experts identified unnecessary items and made suggestions for ensuring content validity. The questionnaire was pilot tested with six vocational teachers who were not part of the sample.

Analysis

Descriptive statistics were used to analyse the data. Multiple regression analysis was used to predict teachers' perceptions regarding: (a) the importance of competencies, (b) emphasis of competencies in their instruction and (c) their training needs to teach the competencies.

Teachers' Profile

Demographic information revealed that 60 (31.6%) of respondents were business teachers, 54 (28.4%) were industrial teachers, 39 (20.5%) were home economics teachers, 17 (8.9%) were agriculture teachers, 14 (7.4%) were health teachers, and 6 (3.2%) were marketing teachers.

In regard to the number of business courses completed, the data revealed that 88 respondents (46%) had completed an accounting course, 75 (39.5%) had completed a marketing course, 62 (32.6%) had completed a finance course, 80 (42.1%) had completed a management course, and 57 (30.1%) had completed a small business management/entrepreneurship course.

In regard to business experience of teachers, the data revealed that 85 (44.7%) had 1-6 years experience in business, 72 (37.9%) had 7 or more years experience in business, and only 33 (17.4%) had no business experience at all.

RESULTS

Qualifications and Preparation of Teachers

Table 1 shows that most teachers (about 73%) 'agreed' with the statement that required teachers to have an education degree. This was followed by a statement that such vocational educators should not be required to do student teaching in small business management areas; and vocational educators should not be required to have pre-service training for teaching small business ownership. Most teachers perceived that vocational educators should be required to take business management courses, and 28.4% agreed that teachers should be required to have business ownership experience.

TABLE 1
Qualifications and preparation for teaching entrepreneurship/small business ownership

	Statements	SD	D	N	A	SA	M*
1.	Vocational educators should have business ownership experience.	16 (8.4%)	44 (23.2%)	70 (36.8%)	30 (15.8%)	24 (12.6%)	6 (3.2%)
2.	Vocational educators should be required to follow the same programme of business administration "core" courses.	17 (8.9%)	48 (25.3%)	41 (21.6%)	53 (27.9%)	24 (12.6%)	7 (3.7%)
3.	Vocational educators in all areas should be trained to teach small business ownership.	19 (10.0%)	51 (26.8%)	46 (24.2%)	52 (27.4%)	16 (8.4%)	6 (3.2%)
4.	Vocational educators should hold a degree in education.	7 (3.7%)	20 (10.4%)	18 (9.5%)	57 (30.0%)	82 (43.2%)	6 (3.2%)
5.	Vocational educators do not need a degree in a business field.	25 (13.2)	37 (19.0%)	48 (25.2%)	52 (27.3%)	23 (12.1%)	5 (3.2%)
6.	Vocational educators should not be required to do student teaching in a small business management area.	12 (6.3%)	42 (22.1%)	44 (23.2%)	64 (33.7%)	23 (12.2%)	5 (2.5%)
7.	Vocational educators should be required to follow a specific curriculum for teaching small business ownership at colleges/universities	13 (6.8%)	49 (25.8%)	60 (31.6%)	53 (27.9%)	10 (5.4%)	5 (2.5%)

TABLE 1 *(Continued)*
Qualifications and preparation for teaching entrepreneurship/small business ownership

	Statements	SD	D	N	A	SA	M*
8.	Vocational educators should not be required to have preservice training for teaching small business ownership because this can be done through inservice training (eg. workshops, seminars, internships).	12 (6.5%)	43 (22.6%)	45 (23.7%)	68 (35.8%)	17 (8.9%)	5 (2.5%)
9.	Vocational educators should have one college course in small business management because this represents sufficient preparation for teaching small business ownership.	11 (5.8%)	41 (21.5%)	58 (30.5%)	59 (31.1%)	15 (7.9%)	6 (3.2%)
10.	I currently use some of the PACE (Program for Acquiring Competence in Entrepreneurship) materials in my instruction.	47 (24.7%)	50 (26.3%)	61 (32.1%)	16 (8.4%)	6 (3.2%)	10 (5.3%)

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, M=Missing.

TABLE 2
Skills and abilities needed by students to be effective entrepreneurs/small business owners

	Statements	SD	D	N	A	SA	M*
1.	Technical skills	1 (0.5%)	1 (0.5%)	6 (3.2%)	77 (40.5%)	94 (49.5%)	11 (5.8%)
2.	Business skills	1 (0.5%)	7 (3.7%)	4 (2.1%)	58 (30.5%)	111 (58.4%)	9 (4.8%)
3.	Human relations skills	— —	— —	1 (0.5%)	39 (20.5%)	140 (73.7%)	10 (5.3%)
4.	Possess high energy level	— —	1 (0.5%)	16 (8.4%)	62 (32.6%)	101 (53.2%)	10 (5.3%)
5.	Be a risk taker	— —	5 (2.6)	17 (8.9%)	96 (50.5%)	63 (33.2%)	9 (4.8%)
6.	Be a negotiator	— —	1 (0.5%)	16 (8.3%)	94 (49.7%)	70 (36.8%)	9 (4.7%)
7.	Possess internal locus of control	1 (0.5%)	7 (3.7%)	58 (30.5%)	66 (34.7%)	45 (23.8%)	13 (6.8%)
8.	Be a self-starter	1 (0.5%)	2 (1.0%)	5 (2.6%)	43 (22.7%)	130 (68.5%)	9 (4.7%)
9.	Be creative	— —	3 (1.6%)	12 (6.3%)	57 (30.0%)	108 (56.8%)	10 (5.3%)
10.	Be confident	1 (0.5%	1 (0.5%)	4 (2.1%)	44 (23.1%)	131 (68.9%)	9 (4.7%)

Note: SD=Strongly Disagree, D=Disagree, N=Neutral, A=Agree, SA=Strongly Agree, M=Missing.

Skills and Abilities Needed by Students to be Entrepreneurs

Table 2 shows that 179 (94.2%) agreed that human relations skills were needed. Other needed skills were: be confident, agreed by 175 (92%) be a self-starter, agreed by 173 (91%) have technical skills, agreed 171 (90%) and have business skills, agreed by 169 (88.9%).

Teaching Entrepreneurial Competencies and Teachers' Training Needs

Table 3 displays a ranking of entrepreneurial competencies as indicated by mean scores. Teachers were asked to rate the competencies they perceived as important to teach, those they emphasized in their instruction, and those they needed most in training to teach.

Vocational teachers perceived that the important competencies to teach were to establish good human relations; develop oral and written communication skills; develop procedures for managing time; and evaluate personal skills and abilities.

Vocational teachers also perceived that the most emphasized competencies in their instruction were; to establish good human relations, develop oral and written communication skills, evaluate personal skills and abilities, and develop procedures for managing time. The highest ranked competencies needed for training were: to evaluate business, conduct market survey;s to seek new profitable opportunities; and to determine trends in the product market.

"Importance", "emphasis" and "training needs" are somewhat correlated. A high p value of 0.97 between "importance" and "emphasis" indicates a strong relationship between them. Important competencies were rated as emphasized and less important competencies were rated as less emphasized. The p value between "importance" and "training needs" is 0.59, and the p value between "importance" and "training needs" is 0.66. The negative value of the coefficient indicated that competencies that are perceived as important and emphasized tend to be needed for less training and vice versa.

TABLE 3
Teaching entrepreneurial competencies as perceived by vocational teachers

Competencies	Important to teach		Emphasized in instruction		Need Training to teach	
	Mean	rank	Mean	rank	Mean	rank
Establish good human relations	4.62	1	4.04	1	2.15	30
Develop oral and written communication skills	4.51	2	3.86	2	2.14	15
Develop procedures for managing time	4.35	3	3.64	4	2.25	25
Evaluate personal skills and abilities	4.30	4	3.79	3	2.20	28
Motivate employees	3.89	5	3.20	6	2.37	18
Develop managerial skills	3.80	6	3.20	5	2.34	22
Maintain financial records	3.74	7	3.14	7	2.29	24
Train employees	3.68	8	3.10	8	2.25	26
Delegate responsibilities	3.67	9	3.08	9	2.17	29
Determine customer needs	3.62	10	2.89	10	2.35	21
Interpret financial statements	3.43	11	2.81	12	2.38	17
Seek new profitable opportunities	3.37	12	2.78	13	2.64	3
Calculate gross and net profit	3.35	13	2.86	11	2.24	27
Control inventory and turnover	3.26	14	2.53	18	2.50	7
Prepare operating budget	3.25	15	2.61	17	2.40	16

TABLE 3 (*Continued*)
Teaching entrepreneurial competencies as perceived by vocational teachers

Competencies	Important to teach		Emphasized in instruction		Need Training to teach	
	Mean	rank	Mean	rank	Mean	rank
Evaluate business	3.24	16	2.68	16	2.69	1
Prepare financial statement	3.23	17	2.77	14	2.36	20
Calculate selling price of product	3.21	18	2.69	15	2.46	11
Determine trends in the product market	3.19	19	2.49	21	2.62	4
Determine the target market	3.18	20	2.48	22	2.45	12
Present product features and benefits to customers	3.17	21	2.51	19	2.47	10
Determine strengths and weaknesses of competition	3.12	22	2.43	24	2.49	8
Manage working capital	3.10	23	2.41	26	2.44	13
Prepare a marketing plan	3.08	24	2.39	28	2.52	6
Prepare daily income and expenses	3.07	25	2.51	20	2.30	23
Prepare cash flow statement	3.01	26	2.42	25	2.41	14
Select potential suppliers	2.99	27	2.30	29	2.48	9
Establish pricing policies	2.98	28	2.44	23	2.53	5
Collect accounts receivable	2.93	29	2.40	27	2.37	19
Conduct market survey	2.90	30	2.22	30	2.65	2

Note: 5 = very high 4 = high 3 = somewhat 2 = little 1 = very little

TABLE 4
Competencies perceived by teachers as high and very high in training needs

Competencies	Frequency	%
Conduct market survey	63	33.2
Seek new profitable opportunities	49	25.8
Determine trends in the product market	48	25.3
Evaluate business	48	25.3
Prepare a marketing plan	43	22.6
Determine strengths and weaknesses of competition	43	22.6
Control inventory and turnover	42	22.1
Develop oral and written communication skills	41	21.6
Collect accounts receivable	41	21.6
Establish pricing policies	41	21.6
Maintain financial records	40	21.1
Prepare financial statements	39	20.5
Calculate selling price of products	39	20.5
Present product features & benefits to customers	39	20.5
Prepare daily income and expenses	38	20.0
Manage working capital	38	20.0
Prepare operating budget	38	20.0
Select potential suppliers	38	20.0

Note: Competencies included were given a score of 4 and 5 by at least 20% of the respondents. Scale: 5 = very high, 4 = high.

Table 4 displays a list of competencies which were perceived by respondents as high or very high in training needs. Fifteen of the competencies were related to accounting and marketing.

Results of Regression Analysis

Table 5 illustrates the summary of regression of teachers' perceptions on the importance of competencies, on the number of business courses completed and the number of years experience in business. The F test of significance $F(2,187) = 10.6$ is significant at the level of $p < .05$. Therefore both predictors, related business management courses completed and number of years of experience in business, significantly predicted teachers' perceptions on the importance of competencies.

Table 6 illustrates the summary of regression of teachers' perceptions regarding emphasis of competencies on the number of courses completed and the number of years of experience in business. The F test of significance $F(2,187) = 22.6$ is significant at the level of $p < .05$. Therefore, both predictors, the number of related business management courses completed and number of years of experience in business, significantly predicted teachers' perceptions regarding the emphasis of business management competencies.

Table 7 indicates that related business management courses completed and number of years of experience in business do not significantly predict teachers' perceptions on their training needs to teach the competencies.

DISCUSSION AND CONCLUSIONS

The findings of this study suppport the call of Ely (1984), Brown (1984), Denton (1985), Hill (1986), Atkinson (1989), Ashmore (1989) and Daughtery and Ristau (1991) who stressed the need for subject matter knowledge in business management courses to provide teachers with a strong knowledge in the concepts and practices of entrepreneurship education. This study also supports the views of Caton (1986) and Rich (1988) who emphasized that being competent in the subject matter is necessary for secondary and post-secondary teachers. This study also indicates that experience in business is impor-

TABLE 5
Summary table of regression of teachers' perceptions on importance of entrepreneurial competencies by number of courses completed and number of years of experience in business

Source	Sum of Squares	df	Mean Square	F	R Squares	P
Model	19842.9	2	9921.4	10.6	.102	.0001
Error	174956.1	187	935.6			
Total	194789.9	189				

TABLE 6
Summary table of regression of teachers' perceptions on emphasis of entrepreneurial competencies in existing vocational programmes by number of courses completed and number of years of experience in business

Source	Sum of Squares	df	Mean Square	F	R Squares	P
Model	29423.24	2	14711.62	22.6	.195	.0001
Error	121550.47	187	650.00			
Total	150973.71	189				

TABLE 7
Summary table of regression on teachers' perceptions on their training needs to teach entrepreneurial competencies by number of courses completed and number of years of experience in business

Source	Sum of Squares	df	Mean Square	F	R Squares	P
Model	5260.6	2	2630.3	2.68	.028	.071
Error	183444.1	187	980.9			
Total	188704.7	189				

tant for teachers and supports the call by Brady *et al.* (1985), Miller (1988), and Wentling *et al.* (1988) for more emphasis to be placed on business experience of teachers who provide instruction.

Teachers' responses on the skills and abilities needed to be effective entrepreneurs indicate that they are not aware of the characteristics that are associated with successful entrepreneurs/small business owners. For example, only 57% of teachers agreed that "possess internal locus of control" was a desirable skill. Teachers' reponses on the importance of competencies also indicate that they are not aware of the competencies associated with successful business. These findings agree with those of Kent (1990) that there is a tendency for educators to confuse entrepreneurship and small business management; and support Kiesner (1990) who believes that entrepreneurship is a new field for educators, and that there is a great deal to be learned about the education of small business owners.

In regard to teaching of entrepreneurial competencies, our findings show that teachers perceive competencies and the emphasis of competencies as equally important. This means that teachers perceive competencies that are important should be emphasized in their instruction. But teachers differed in their perception on which competencies should be emphasized in training. Competencies which were not emphasized in instruction seemed to be perceived as highly needed for training. This would indicate that teachers do not teach competencies related to marketing, accounting and finance probably because they are not familiar with these aspects of business. The same reason could also be attributed as to why competencies such as conducting market surveys, determining trends in the product market, and establishing pricing policies were perceived as highly needed for training. The multiple regression analysis indicates that business knowledge and business experience significantly influence a teacher's perceptions on the importance of competencies and teacher's emphasis of competencies in their instruction. Teachers should therefore learn competencies related to marketing and accounting to make them aware of the importance of such competencies.

The findings of the study show that vocational teachers believe that having a degree in education is an important qualification to teach entrepreneurship. They also believe that vocational educators need business knowledge to qualify them to teach entrepreneurship; and that teachers could be trained by attending inservice training, seminars, internships, conferences and workshops. Vocational teachers agreed that the most needed skills in effective entrepreneurship are human relations skills, confidence, self-motivation and the possession of technical and business skills.

Our results also suggest that vocational teachers perceive that competencies related to general management should take priority in teaching and should be emphasized more in their instruction than specific competencies related to accounting and marketing. Teachers need more training to teach specialized competencies related to marketing and accounting; to conduct market surveys, determine trends in the product market, prepare a marketing plan, control inventory and turnover, collect accounts receivable and maintain financial records. Finally, vocational teachers with more business knowledge and more business experience are likely to perceive these competencies as more important to teach and to emphasize more in their curriculum.

Recommendations

Based on the findings of this study the following recommendations are offered for the improvement of teacher preparation in teaching entrepreneurship in the vocational education programme specifically in the Malaysian school system. First, the perceptions of vocational teachers derived from this study should be considered in the formulation of entrepreneurship instruction in Malaysian secondary schools. Second, competencies related to marketing, accounting and finance should be emphasized at school. Teachers should be trained to teach these competencies. Unless vocational educators receive appropriate training, they will not pay adequate attention to self-employment as a career option. Third, both business experience and business knowledge are important ingredients that make for effective teaching of entrepreneurship. Future teachers should therefore, be given sufficient knowledge and experience in business through effective and efficient teachers' training programmes. Fourth, teacher training institutions should work with the various departments in a School of Business to develop needed courses of study for teacher preparation. Since this study was done outside Malaysia, the following suggestions for further research should be considered:

1) Identification of other predictor variables that may influence Malaysian teachers' perceptions regarding entrepreneurial competencies in vocational programmes, especially those related to their training needs.
2) Further study should be conducted especially in Malaysia to determine the consistency of perceptions of teachers regarding the teaching of entrepreneurial competencies in vocational programmes.
3) A research design such as a triangulation method is advocated so that perceptions of other professionals such as teacher educators, supervisors and entrepreneurs could be ascertained.

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(*Received 30 Jan. 1993*)