JOURNAL OF EDUCATION FOR BUSINESS, 87: 94–101, 2012

ISSN: 0883-2323 print / 1940-3356 online
DOI: 10.1080/08832323.2011.573594

Routledge
Taylor & Francis Group

Entrepreneurship Education: Workshops and Entrepreneurial Intentions

Mark Pruett
University of South Carolina Upstate, Spartanburg, South Carolina, USA

Using data collected from participants in an entrepreneurship education workshop series, the author examined the series' impact and tested a model of entrepreneurial intentions incorporating social and psychological factors. He found that entrepreneurial disposition and workshop participation significantly influenced intentions, exposure to role models and the strength of family support did not significantly influence intentions and, in contrast to previous research, there was no significant difference between men and women regarding interest in entrepreneurship. The author also reports on participants' perceptions of program effectiveness and the status of their ventures.

Keywords: entrepreneurship education, self-efficacy, training, workshops

I surveyed participants in an entrepreneurship education program consisting of interlinked workshops and executive mentoring. Although entrepreneurship training is offered by various economic development entities, commerce chambers, nonprofits, and incubators, there is little targeted research to guide program design because much of entrepreneurship education research has focused on undergraduate and MBA students.

The choice of an entrepreneurial career is an important research issue (Kuratko, Hornsby, & Naffziger, 1997). Some research explores the role of education/training (e.g., Aronsson, 2004; Bennett, 2006; Smith, 2003), and some explores regional entrepreneurship issues (e.g., Davidsson & Wiklund, 1997).

In the present study I examined the impact of entrepreneurship education on self-efficacy and entrepreneurial intentions (plans to pursue careers of business ownership). Self-efficacy—task-specific self-confidence—is central within social-cognitive theory (Bandura, 1977, 1982) and plays an important role in entrepreneurship research (Chen, Greene, & Crick, 1998). It strongly predicts entrepreneurial intentions (Baughn, Cao, Le, Lim, & Neupert, 2006; Krueger, Reilly, & Kasrund, 2000; Peterman & Kennedy, 2003; Segal, Borgia, & Schoenfeld, 2002, 2005). Multiple processes may influence self-efficacy—enactive mastery, role modeling, persuasion, and self-judgments (Bandura, 1982). Some research focuses specifically on entrepreneurship education's impact on self-efficacy and intentions (Cooper & Lucas, 2006; Zhao, Seibert, & Hills, 2005).In this study, I delivered a workshop series and executive mentoring to potential entrepreneurs over four years. The results suggest that this educational design series has a significant effect on self-efficacy and entrepreneurial intentions.

Correspondence should be addressed to Mark Pruett, University of South Carolina Upstate, Johnson College of Business and Economics, 160 E. Saint John Street, Spartanburg, SC 29306, USA. E-mail: markpruett@hotmail.com

Workshop Series

Interest in entrepreneurship education extends beyond the classroom (Kuratko, 2005; Soloman, Duffy, & Tarabishy, 2002) and can be important in public policy (Acs, Audretsch, & Strom, 2009).

The workshops support entrepreneurship in a region hard hit by globalization and job loss. They are designed to educate new entrepreneurs, create publicity, foster an entrepreneurial culture, provide practical help, and connect participants with support agencies. The structure of the workshops remained constant throughout the study period with no significant changes in content.

Participants were identified through multiple channels—print advertising, newspaper stories, radio and television commercials, and widely placed brochures. Respondents may or may not have specific ideas and may or may not have partially developed business plans.

The first 3-hr workshop explores the advantages and disadvantages of entrepreneurship, and the personal character-

istics of typical entrepreneurs. This design helps participants decide whether business ownership may fit them. The workshop also covers idea generation, self-assessments, and the summarizing of the participants' project ideas.

The second workshop occurs two weeks later. It covers planning, research methods, functional issues, culture, entry methods, growth factors, and family business and succession issues. Participants submit a needs assessment form and develop an assessment and planning document before the third workshop.

In the third workshop participants meet successful entrepreneurs for one-on-one discussion. Matches are based on industry, identified needs, and personality. Mentors agree to nondisclosure. After working together for several hours, the group shares progress and meets various development and assistance organizations.

Model

Figure 1 is the model of self-efficacy, intentions, and the impact of training. An individual's entrepreneurial intentions depend on self-efficacy factors of social persuasion (expected family support), role modeling (personal exposure to entrepreneurial role models), enactive mastery (entrepreneurial disposition), and workshop education/training.

Role Modeling: Personal Exposure

Having family or contacts that are or were entrepreneurs should increase the likelihood of self-employment (Feldman, Koberg, & Dean; 1991). This is supported by more recent examinations of entrepreneurial self-efficacy (ESE)—an individual's assessment of, and confidence in, his or her ability to successfully start a business (Chen et al., 1998; Zhao et al., 2005).

Role models can strengthen self-efficacy through familiarity, experience, and social persuasion (Bandura, 1982) and accordingly should help to overcome fear, inexperience, and practical hurdles. Thus, I formed the following first hypothesis:

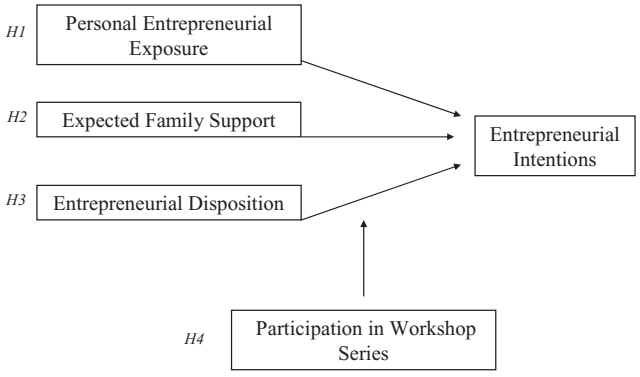

FIGURE 1 Model of entrepreneurial intentions.

Hypothesis 1 (H_1): Personal exposure to entrepreneurial role models would be positively related to entrepreneurial intention.

Social Persuasion: Family Support

Tan (2001) noted a negative relationship between the perceived feasibility of entrepreneurship and the social significance of failure. The higher the significance of failure, the less feasible the opportunity, yet norms about failure vary widely.

Researchers study norms in a relatively precise and relevant way—the importance of expected family reaction. Regardless of whether family bonds are supportive or antagonistic, family ties are the closest and strongest bonds most people have and thus the ones most likely to influence decisions. Expected family reactions may create strong conflicts (Pruett, Shinnar, Toney, Llopis, & Fox, 2009). Family reaction may be positive (Feldman et al., 1991), but it also may focus on uncertainty, risk, and possible embarrassment (Tan, 2001). Thus, I formed the following second hypothesis:

H_2: Expected family support would positively related to entrepreneurial intention.

Enactive Mastery: Entrepreneurial Disposition

The risk and effort of ownership should attract confident, energetic, adaptable individuals. The construct of self-efficacy figures significantly in research (Chen et al., 1998). Cooper and Lucas (2006) found that entrepreneurship education positively influences self-efficacy and entrepreneurial intentions. However, Cox, Mueller, and Moss (2003) found that training may decrease self-efficacy. Self-efficacy appears to be the strongest predictor of entrepreneurial intentions (Baughn et al., 2006; Krueger et al., 2000; Peterman & Kennedy, 2003; Segal et al., 2002, 2005).

I introduce a related, focused concept—entrepreneurial disposition—to highlight in particular the entrepreneurial context of motivation, in which creativity and the ability to self-start are especially important. Entrepreneurial disposition is an individual's sense of self—an individual's judgment of his or her own personal creativity and personal initiative. Thus, given the risks and demands of entrepreneurship, I formulated the following third hypothesis:

H_3: Entrepreneurial disposition would be positively related to entrepreneurial intention.

Influence of the Workshop Series

Entrepreneurship education, as carried out in the first workshop, should help identify barriers (Ronstadt, 1987), clarify risks (Kuratko & Hodgetts, 2004), and explore personal characteristics (Hood & Young, 1993).

The remainder of the series helps strengthen the elements of self-efficacy (Bandura, 1977, 1982): participants

gain project-specific experience and knowledge by researching and organizing a business plan, they engage in modeling through the instructor presentations and interaction with entrepreneur mentors, and experience positive social persuasion. And, as Ronstadt (1987) argued, a crucial component of entrepreneurship education is introducing students to assistance networks.

By helping participants to understand entrepreneurship and their own circumstances, the workshops should positively influence self-efficacy and entrepreneurial disposition and, consequently, entrepreneurial intention. Thus, I formulated the following fourth hypothesis:

H_4: Workshop participation would be positively related to entrepreneurial intention.

METHOD

Delivered six times in four years, the series attracted 300 registrants. A telephone survey consisting mostly of Likert-type scale questions (4 and 7 point scales detailed below) and demographic questions gained 105 respondents, for a response rate of 31%.

Two variables measured a respondent's personal exposure to role models—existence of start-up businesses within the circle of friends, and existence of entrepreneurs in the family. These binary variables were dummy coded in analysis. Family support was measured as expected family reaction on a scale ranging from hostility to strong support. Regarding entrepreneurial disposition, I asked respondents to indicate the degree to which they considered themselves to be creative and full of initiative to start businesses. Respondents ranked their disposition on a Likert-type scale ranging from 1 (*not entrepreneurial at all*) to 7 (*very entrepreneurial*).

RESULTS

SPSS analyses included *t* tests, analyses of variance, and general linear modeling. If significant differences in variance were found (using Levene's test), then equal variances were not assumed in subsequent *t* tests.

The study focused on the effect of exposure to entrepreneurs, expected family support, disposition, and, especially, workshop participation on intentions. Table 1 shows descriptive statistics and binary correlations.

Regarding exposure to entrepreneurs, half of respondents had entrepreneurs in their immediate circle of friends ($M = 0.49$, $SD = 0.50$), and just over half had entrepreneurs in the family ($M = 0.55$, $SD = 0.50$). There was no significant correlation between these two variables in the raw binary correlations. Regarding expected family support, many respondents felt that their families would be unsupportive of their efforts or attempt to discourage them ($M = 1.18$, $SD = 4.79$). Interestingly, the expected family reaction had a highly significant correlation with entrepreneurial intentions, $t(74) = -.332$, $p < .001$, but the relationship is inverse. I return to this finding subsequently in the modeling analysis and conclusions. Respondents perceived their entrepreneurial disposition ($M = 4.60$, $SD = 0.98$) to be somewhat higher than the norm. Unsurprisingly, disposition had a highly significant correlation with intentions, $t(74) = .382$, $p < .001$, and a significant correlation with the presence of entrepreneurs in respondents' circle of friends, $t(100) = .192$, $p < .05$. More than 60% of the respondents participated in at least two workshops ($M = 2.74$, $SD = 0.95$). Workshop participation was significantly correlated with intentions, $t(74) = .158$, $p < .10$, and with disposition, $t(102) = .152$, $p < .10$. Interestingly, participation was significantly yet inversely correlated with expected family reaction, $t(99) = -.157$, $p < .05$.

Table 2 summarizes the modeling analysis. The results show no support for H_1, and partial support for H_2, H_3, and H_4. As I discuss later, entrepreneurial disposition and workshop participation were positively and significantly related to intentions. The table shows the iterations (steps A through D) in the stepwise regression leading to the full model E. In addition to the unstandardized coefficients, I provide standardized beta coefficients for the full model E to compare the relative impact of changes in the different independent variables.

Baseline step A incorporates exposure to entrepreneurial role models to explain intentions. The model explains 1.8% of the variance in intentions, but these results are statistically

TABLE 1
Descriptive Statistics and Binary Correlations

Variable	*M*	*SD*	1	2	3	4	5	6
Entrepreneurial intentions	4.60	0.98	—					
Entrepreneurship in immediate circle	0.49	0.50	−.124	—				
Entrepreneurship in family	0.55	0.50	.123	.105	—			
Expected family reaction	1.18	4.79	−.332***	−.049	.077	—		
Entrepreneurial disposition	5.19	1.37	.382***	−.192**	.072	−.092	—	
Workshop participation	2.74	0.95	.158*	−.023	−.006	−.157**	.152*	—

Note. $n = 71$–105 (pairwise exclusion for missing data).
*$p < .05$. **$p < .01$. ***$p < .001$.

TABLE 2
Stepwise Regression Model of Intentions ($N = 102$)

	Standardized β coefficients					
Model	A	B	C	D	E	F
Intercept	4.602****	5.130***	4.265***	3.248***	.413	
Exposure: Recent start-ups by acquaintances	−.195	−.221	−.139	−.136	−.196	−.100
Entrepreneurs in immediate family	.202	.239	.198	.202	.269	.136
Expected family reaction		−.460†	−.414†	−.303	−.262	−.127
Entrepreneurial disposition			.144†	.107	.664**	.926
Workshop participation				.390***	1.360**	1.311
Participation × disposition					−.192*	−1.327
ΔF	0.642	3.608†	2.846†	11.730***	4.865*	
ΔR^2	.018	.049	.038	.135	.053	
Total model R^2	.018	.068	.106	.241	.294	

Note. The dependent variable was entrepreneurial intentions. All columns (A–F) report standardized β values.
$^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

insignificant. Step B, which explains an additional 4.9% of total variance in entrepreneurial intentions, introduces the expected reaction of the respondent's family to entrepreneurial plans. Interestingly, the influence, although statistically significant, is the inverse of the hypothesized relationship. I believe this is simply an artifact of the data—roughly 85% of respondents, regardless of intention, reported that they did not expect their families to be highly supportive of embarking on entrepreneurial ventures.

Step C adds entrepreneurial disposition. This stronger model explains a total of 10.6% of the variance in intentions.

Steps D and E (the full model) incorporate the impact of workshop participation and the interaction of participation with disposition. The total variance explained by the full model was 29.4%.

In summary, the full model suggests that entrepreneurial intentions were positively and significantly influenced by an individual's entrepreneurial disposition ($p < .001$) and degree of participation in the workshop series ($p < .001$). Exposure to role models and expected family reaction did not seem to matter.

The standardized β coefficients in Table 2 provide insight regarding relative impact. Changes in entrepreneurial disposition ($\beta = 0.926$) and workshop participation ($\beta = 1.311$), along with the interaction between the two, had the biggest relative impact on entrepreneurial intentions. Curiously, the interaction of disposition and participation is negatively related to intentions. There was no clear rationale for this—it might be a quirk resulting from the relatively small sample size.

Perceived Impacts of Workshops on Participants

An additional objective was to assess the impact of the workshops. Table 3 summarizes the findings. Survey questions used a 4-point Likert-type scale ranging from 1 (*none*) to 4 (*a lot*).

More than 50% of respondents stated that the workshops helped some or a lot in making connections with other start-up businesses ($M = 2.57$, $SD = 1.08$) and with meeting support organizations ($M = 2.72$, $SD = 1.12$). Respondents who did not find the workshops helpful tended to be those who did not attend the full series—the last workshop is for meeting mentors and support organizations.

More than three-fourths (76%) of respondents stated that the workshops helped some or a lot in understanding whether pursuing entrepreneurship was the right choice ($M = 3.07$, $SD = 1.05$). Only 10% did not find them useful for this purpose, but most of these respondents did not attend the full series. Half (50%) of the respondents who thought the program helped a lot attended only the first workshop session, suggesting it helped participants to screen themselves.

More than two-thirds (69%) thought the workshops helped their projects some or a lot ($M = 2.93$, $SD = 0.94$). The 8% who thought the workshops were not useful did not complete the series.

Fully 85% replied that the workshops helped them some or a lot to develop their plans further ($M = 2.74$, $SD = 1.06$). More than half (55%) of those respondents who felt that the workshops did not help, and 55% of those who felt they helped a little, attended only the first workshop.

Almost half of respondents (47%) stated that the workshops changed the direction of their plans ($M = 1.92$, $SD = 1.12$). Of the respondents who stated that their plans' directions were affected a lot, 70% of them did not attend the full series, again suggesting that the screening focus in the early sessions may be effective.

Regarding the overall value of the series ($M = 3.33$, $SD = 0.85$), only two respondents thought it was not helpful. More than half (55%) thought it helped a lot. Of the ones who thought it helped a lot, 48% attended only the first workshop.

TABLE 3
Participant Perceptions of Outcomes

			Participation							
			First WS only		First and second WS		All WS		Total	
Response	*M*	*SD*	*n*	%	*n*	%	*n*	%	*n*	%
Meet other entrepreneurs ($n = 75$)	2.57	1.08								
1 (None)			8	50	6	38	2	13	16	21
2 (Little)			4	22	8	44	6	33	18	24
3 (Some)			11	48	6	26	6	26	23	31
4 (A lot)			8	44	5	28	5	28	18	24
Link with support organizations ($n = 74$)	2.72	1.12								
1 (None)			4	27	7	47	4	27	15	20
2 (Little)			5	33	4	27	6	40	15	20
3 (Some)			10	50	3	15	7	35	20	27
4 (A lot)			12	50	11	46	1	4	24	32
Determine if entrepreneurship is right for me ($n = 74$)	3.07	1.05								
1 (None)			2	20	4	40	4	40	10	14
2 (Little)			1	13	4	50	3	38	8	11
3 (Some)			14	61	4	17	5	22	23	31
4 (A lot)			13	39	13	39	7	21	33	45
Was useful for my project ($n = 73$)	2.93	0.94								
1 (None)			3	50	3	50	0	0	6	8
2 (Little)			5	29	6	35	6	35	17	23
3 (Some)			10	38	8	31	8	31	26	36
4 (A lot)			12	50	7	29	5	21	24	33
Develop my business plan ($n = 74$)	2.74	1.06								
1 (None)			6	55	3	27	2	18	11	15
2 (Little)			11	55	4	20	5	25	20	27
3 (Some)			4	20	9	45	7	35	20	27
4 (A lot)			8	35	9	39	6	26	23	31
Led me to change my plans ($n = 75$)	1.92	1.12								
1 (None)			13	33	13	33	14	34	40	53
2 (Little)			6	55	3	27	2	18	11	15
3 (Some)			7	50	6	43	1	7	14	19
4 (A lot)			4	40	3	30	3	30	10	13
Overall value of series ($n = 76$)	3.33	0.85								
1 (None)			1	50	0	—	1	50	2	3
2 (Little)			4	31	6	46	3	23	13	17
3 (Some)			6	32	5	26	8	42	19	25
4 (A lot)			20	48	14	33	8	19	42	55
Series impact of entrepreneurial ability ($n = 75$)	3.12	1.05								
1 (None)			6	67	2	22	1	11	9	12
2 (Little)			4	40	4	40	2	20	10	13
3 (Some)			7	37	6	32	6	32	19	25
4 (A lot)			14	38	13	35	10	37	37	49

Almost half the respondents (49%) felt that the program increased their level of confidence in their ability a lot ($M = 3.12$, $SD = 1.05$). The respondents who felt the least impact also had the briefest participation.

Women Respondents

One particularly interesting finding concerns differences between men and women. Some previous entrepreneurship researchers have concluded that there are important differences but this study, in contrast, found that the differences were insignificant.

Women comprised two-thirds of the sample. One explanation for the preponderance of women may be that men in the region are more likely to be employed already. I used means testing to assess between-group differences and did not assume equality of variance in the means-testing when significantly unequal variances between the groups were found (Levene's test).

The data showed no meaningful difference between men and women on the following dimensions: the likelihood of pursuing the business idea brought to the workshop series, $t(72) = 0.19$, $p = .237$, the impact of workshops on confidence in business ability, $t(72) = 0.91$, $p = .362$, intention

TABLE 4
Status of Business Projects

Status		Participation			Total
		1st WS only	1st and 2nd WS only	Came to all 3 WS	
Cancelled plans to run a business	Count	5	1	1	7
	% within status	71.4	14.3	14.3	100.0
	% within participation	17.9	4.0	5.3	9.7
Looking for different business idea	Count	6	2	1	9
	% within status	66.7	22.2	11.1	100.0
	% within participation	21.4	8.0	5.3	12.5
Actively working on the start-up	Count	14	15	1	30
	% within status	46.7	50.0	3.3	100.0
	% within participation	50.0	60.0	5.3	41.7
The business now is up and running	Count	3	7	16	26
	% within status	11.5	26.9	61.5	100.0
	% within participation	10.7	28.0	84.2	36.1
Total	Count	28	25	19	72
	% within status	38.9	34.7	26.4	100.0
	% within participation	100.0	100.0	100.0	100.0

to eventually run a business, $t(71) = 0.08$, $p = .934$, or entrepreneurial disposition, $t(72) = 0.17$, $p = .244$.

These findings challenge various older studies ranking women lower on entrepreneurial dimensions compared to men. In one study using a substantial sample of nearly 1,000 individuals, women were significantly less likely than men to want to start their own businesses (62% vs. 72%; Kourilsky & Walstad, 1998). When assessing the impact of race on entrepreneurial intentions, others found that men expressed higher entrepreneurial interest regardless of the respondent's race (Wilson, Marlino, & Kickul, 2004). Finally, Shay and Terjensen's (2002) five-nation study indicated that men had greater entrepreneurial aspirations, and more aggressive timelines and goals.

The fact that this study found no significant differences between men and women is tantalizing. However, it is in line with other recent research that finds no significant difference between men and women regarding entrepreneurial attitudes, disposition, and intentions (Shinnar, Pruett, & Toney, 2009).

Status and Impact of Business Projects

The survey was conducted approximately 2.5 years after the first workshop series, and six months after the sixth series. Table 4 shows that respondents who had cancelled their business plans or were seeking different opportunities tended to do so after attending the first workshop. Of the 16 respondents who cancelled their plans or sought different opportunities, eleven (68%) of them did so after attending the first workshop. Again, this suggests that the screening design of the first workshop may have discouraged weak projects.

Thirty respondents were actively working on a start-up business and 26 had opened. Sales data were not available. Table 5 provides a summary of economic impact data. Businesses in operation reported a total investment to date of $634,500. Those in the start-up stage had already spent $118,850. Although these were small operations, they did have a positive impact in terms of economic investment. They also positively affected regional employment—including the owners, the active businesses had hired 50 people and anticipated hiring 53 more. The ones still in the start-up stage anticipated hiring almost 100 in their initial operations.

Limitations

All the observed relationships were reported by the same group of respondents, so any observed relations might be in part a result of common method effect (Fiske, 1982). However, this limitation is consistent with the limitations of prior empirical studies in this area, and of most survey research.

Using a restricted sample limits generalizability. Refinement of the survey instrument and method is desirable. For

TABLE 5
Dimensions of Economic Impact

Dimension	Business is now up and running	Actively working on start-up
Number of businesses	26	30
Investment to date[a,b]		
Minimum	$500	$150
Maximum	$260,000	$50,000
Average	$30,214	$8,489
Total	$634,500	$118,850
Employees		
Already hired (including owners)	50	
Planned (including owners)	53	98

[a]Investment data missing for two firms now in operation. Each may be roughly $1,000,000. [b]Investment data for firms in start-up phase reflects only actual investments thus far. Total planned investment is unknown.

example, it would be preferable to pretest participants' entrepreneurial disposition and intentions prior to the program. Further, I cannot discount the possible impact of intervening forces due to time. The workshops were conducted over a period of four years, and the later sets of participants were given the follow-up surveys with less of a time lag than the initial participants. Changes in personal circumstances, the slide of the economy into recession, or other uncontrollable or unknown factors might have influenced the outcomes of the study.

DISCUSSION

This study results suggest three particularly intriguing conclusions. First, an entrepreneurship support program can yield significant practical benefits. Second, the substantial potential for tension between entrepreneurs and their families merits further research. Third, previously reported differences between men and women may be less meaningful than suggested by older research.

Practical Implications

As expected, multistage education with individual mentors proved useful. It discourages projects that appear untenable—more than 12% of respondents ended up looking for different ideas. Second, it helps give an objective view of entrepreneurship—almost 10% of respondents cancelled plans to pursue entrepreneurship, and most did so after one workshop. Both of these educational screening benefits are crucial for successful economic development.

Third, the design provides psychological encouragement and practical support. As noted previously, entrepreneurial disposition and workshop participation have the biggest relative impact on entrepreneurial intentions. I drew an unsurprising but important conclusion—providing support to budding business owners helps stimulate entrepreneurial activity. In other words, economic development programs focused on entrepreneurship have the potential for significant positive impact.

Regarding entrepreneurial disposition, I draw a further conclusion—perhaps encouraging entrepreneurship should mean focusing specifically on strengthening participants' beliefs about their own creativity, autonomy, and ability. Initially, fostering confidence and initiative may matter more than practical tools, an idea already raised in self-efficacy studies (Zhao et al., 2005). The conclusion is speculative, but the question merits attention—should introductory entrepreneurship education focus more on building self-efficacy than on tools?

Family Tensions

One area that appears largely neglected in entrepreneurship literature is the subject of familial tension or conflict. Interestingly, in this study the expected degree of family support did not influence entrepreneurial intentions. However, there appears to be an important looming conflict—many respondents believe their families may discourage their entrepreneurial plans. Will this lead to fewer entrepreneurial ventures? Or, will it bring increased family conflict? Further study is warranted—addressing the family support issue in entrepreneurship education research will strengthen researchers' understanding of the entrepreneurship process, increase the likelihood of individuals embarking on it, improve the probability of satisfaction and success, and help resolve a difficult issue for entrepreneurs and their families. Pruett et al. (2009) suggested that entrepreneurship research, education, and support may need to emphasize understanding and resolving familial tensions/barriers.

Women Entrepreneurs

Another interesting finding is that, despite a widely held presumption that entrepreneurs are men (de Pillis & Meilich, 2006), there were no significant differences in this study between men and women regarding workshop impact, disposition, or intentions. However, an argument can be made that prior research might have been constrained by its focus on entrepreneurial aspiration and interest, rather than specific intentions. Prior research also might have been constrained by its use of data from youth and college student participants. Entrepreneurship education research in this vein continues to focus on a younger audience (e.g., Peterman & Kennedy, 2003; Wilson, Kickul, & Marlino, 2007). However, it is not unreasonable to expect that age and experience may well equalize any youthful differences between men and women—in this study, for example, the average age of respondents was 47 years. Further, any differences earlier in life may be offset by the opportunity afforded by entrepreneurship to women who may otherwise face career advancement issues (e.g., Heilman & Chen, 2003). Additionally, I cannot dismiss the possibility that norms have changed in the years since those earlier studies. Although in some cases women may view the entrepreneurial environment and themselves less favorably (e.g., Langowitz & Minniti, 2007), the women in this study did not differ from men in terms of workshop impact, disposition, or intentions.

Future Research

In the present study I assessed one approach to entrepreneurship education and support. Further empirical study, particularly research that simultaneously assesses multiple educational approaches, will improve researchers' understanding of what works best, in what conditions and why. Certainly, as noted previously, one limitation of the present study was its relatively small sample size. A larger study, looking at multiple intervention designs, would be useful.

It is interesting to observe that role models did not influence entrepreneurial intentions. This seems a rather curious

result. Additional research may help clarify whether this was the consequence of statistical variation and small sample size, or whether there are in fact conditions in which the impact of role models is weak. Additionally, the issues of family tensions and differences between men and women merit further study. It may be useful to study these from sociological or cultural perspectives, in addition to business and education perspectives.

These are not questions of solely theoretical interest. Development of better entrepreneurship education depends on studying these types of questions.

REFERENCES

Acs, Z., Audretsch, D., & Strom, R. (2009). *Entrepreneurship, growth, and public policy*. New York, NY: Cambridge University Press.

Aronsson, M. (2004). Education matters—but does entrepreneurship education? An interview with David Birch. *Academy of Management Learning and Education*, *3*, 289–292.

Bandura. A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*, 191–215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, *37*, 122–147.

Baughn, C., Cao, J., Le, L., Lim, V., & Neupert, K. (2006). Normative, social and cognitive predictors of entrepreneurial interest in China, Vietnam, and the Philippines. *Journal of Developmental Entrepreneurship*, *11*, 27–77.

Bennett, R. (2006). Business lecturers' perceptions of the nature of entrepreneurship. *International Journal of Entrepreneurial Behaviour and Research*, *12*, 165–188.

Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, *13*, 295–316.

Cooper, S., & Lucas, W. (2006). Developing self-efficacy for innovation and entrepreneurship: An educational approach. *International Journal of Entrepreneurship Education*, *4*, 141–162.

Cox, W., Mueller, S., & Moss, S. (2003). The impact of entrepreneurship education on entrepreneurial self-efficacy. *International Journal of Entrepreneurship Education*, *1*, 229–245.

Davidsson, P., & Wiklund, J. (1997). Values, beliefs, and regional variations in new firm formation rates. *Journal of Economic Psychology*, *18*, 179–199.

de Pillis, E., & Meilich, O. (2006). Think entrepreneur, think male? Business students' assumptions about a hypothetical entrepreneur. *International Journal of Entrepreneurship Education*, *4*, 3–18.

Feldman, H. D., Koberg, C. S., & Dean, T. J. (1991). Minority small business owners and their paths to ownership. *Journal of Small Business Management*, *29*, 12–27.

Fiske, D. (1982). Convergent-discriminant validation in measurement and research strategy. In D. Brinsberg & L. Kidder (Eds.), *New directions for methodology of social and behavioral sciences: Forms of validity in research* (pp. 77–92). San Francisco, CA: Jossey-Bass.

Heilman, M. E., & Chen, J. J. (2003). Entrepreneurship as a solution: The allure of self-employment for women and minorities. *Human Resource Management Review*, *13*, 347–365.

Hood, J. N., & Young, J. E. (1993). Entrepreneurship's requisite areas of development: A survey of top executives in successful entrepreneurial firms. *Journal of Business Venturing*, *8*, 115–135.

Kourilsky, M. L., & Walstad, W. B. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences, and educational practices. *Journal of Business Venturing*, *13*, 77–88.

Krueger, N., Reilly, M., & Casrund, A. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, *15*, 411–432.

Kuratko, D. F. (2005). The emergence of entrepreneurship education: Development, trends, and challenges. *Entrepreneurship Theory and Practice*, *29*, 577–598.

Kuratko, D. F., & Hodgetts, R. M. (2004). *Entrepreneurship: Theory, process, practice*. Mason, OH: South-Western College.

Kuratko, D. F., Hornsby, J. S., & Naffziger, D. W. (1997). An examination of owners' goals in sustaining entrepreneurship. *Journal of Small Business Management*, *35*, 24–33.

Langowitz, N. S., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship Theory and Practice*, *31*, 341–364.

Peterman, N., & Kennedy, J. (2003). Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship Theory and Practice*, *27*, 129–144.

Pruett, M., Shinnar, R., Toney, B., Llopis, F., & Fox, J. (2009). Explaining entrepreneurial intentions of university students: A cross-cultural study. *International Journal of Entrepreneurial Behaviour and Research*, *15*, 571–594.

Ronstadt, R. (1987). The educated entrepreneurs: A new era of entrepreneurial education is beginning. *American Journal of Small Business*, *11*, 37–53.

Segal, G., Borgia, D., & Schoenfeld, J. (2002). Using social cognitive career theory to predict self-employment goals. *New England Journal of Entrepreneurship*, *5*, 47–56.

Segal, G., Borgia, D., & Schoenfeld, J. (2005). The motivation to become an entrepreneur. *International Journal of Entrepreneurial Behavior & Research*, *11*, 42–57.

Shay, J., & Terjensen, S. (2005, June). *Entrepreneurial aspirations and intentions of business students: A gendered perspective*. Paper presented at the Babson Entrepreneurship Conference, Boston, MA.

Shinnar, R., Pruett, M., & Toney, B. (2009). Entrepreneurship education: Attitudes across campus. *Journal of Education for Business*, *84*, 151–158.

Smith, M. O. (2003). Teaching basic business: An entrepreneurial perspective. *Business Education Forum*, *58*, 23–25.

Solomon, G. T., Duffy, S., & Tarabishy, A. (2002). The state of entrepreneurship education in the United States: A nationwide survey and analysis. *International Journal of Entrepreneurship Education*, *1*, 65–86.

Tan, J. (2001). Innovation and risk-taking in a transitional economy: A comparative study of Chinese managers and entrepreneurs. *Journal of Business Venturing*, *16*, 359–376.

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications of entrepreneurship education. *Entrepreneurship Theory and Practice*, *31*, 387–406.

Wilson, F., Marlino, D., & Kickul, J. (2004). Our entrepreneurial future: Examining the diverse attitudes and motivations of teens across gender and ethnic identity. *Journal of Developmental Entrepreneurship*, *9*, 177–197.

Zhao, H., Seibert, S., & Hills, G. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, *90*, 1265–1272.