OPPORTUNITY RECOGNITION AND ENTREPRENEURSHIP EDUCATION: A MARRIAGE WAITING TO HAPPEN?

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Keywords: Entrepreneurship education, opportunity recognition, creativity
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ABSTRACT

Scholars and researchers in entrepreneurship have reported that small business management and entrepreneurship courses at both the 2 and 4-year college and university levels have grown in the number and diversity of course offerings from 1990-2004. This expansion of educational offerings has been fueled in part by dissatisfaction with the traditional Fortune 500 focus of business education voiced by students and accreditation bodies (Solomon and Fernald, 1991). The dilemma is not that demand is high but that the pedagogy selected meets the new innovative and creative mindset of students. Plaschka and Welsch (1990) recommend an increased focus on entrepreneurial education and more reality and experientially-based pedagogies such as those recommended by Porter and McKibbin (1988). The challenge to educators will be to craft courses, programs and major fields of study, meeting the rigors of academia while keeping a reality-based focus and entrepreneurial climate in the learning experience environment. One demand is that they must be able to initially recognize a potential opportunity, as a precursor to further behavior. The process that opportunity recognition entails can foretell the success or failure of a new venture – it is a crucible. There is a burgeoning body of literature in the young field of entrepreneurship and entrepreneurship education; however, little research exists regarding the specific competency of opportunity recognition, and even less of the research is empirical in nature.

INTRODUCTION

The purpose of this paper is to review the entrepreneurship education literature to explore current thinking regarding entrepreneurs and the competencies necessary for success, and will investigate the opportunity recognition competency specifically. Models of the opportunity recognition process, creativity literature, and pedagogical methodologies will also be the subject of inquiry, along with their theoretical underpinnings. This paper will search for relationships between concepts and proposals for how we might best prepare students to follow their entrepreneurial dreams.

The entrepreneurial experience can be characterized as being chaotic and ill-defined, and our entrepreneurship education pedagogies should reflect this characterization. In addition, we often make the assumption that it is relatively easy for entrepreneurship students to develop new ideas for their business start-ups. Quite a number of researchers have written about entrepreneurial competencies; however, the competencies that are required for new business start-ups are often addressed by educators in an ad-hoc manner. There is little consensus on just what exactly entrepreneurship students should be taught.

For entrepreneurship educators, the challenge is to provide the subject matter, resources, and experiences that will prepare entrepreneurship students to cope with the myriad of expectations and demands they will face as they start their new ventures. One demand is that they must be able to initially recognize a potential opportunity, as a precursor to further behavior. The process that opportunity recognition entails can foretell the success or failure of a new venture – it is a crucible. It would seem apparent, then, that adequate attention should be given to the pedagogies addressing this competency. There is a burgeoning body of literature in the young field of entrepreneurship and entrepreneurship education; however, little research exists regarding the specific competency of opportunity recognition, and even less of the research is empirical in nature.
METHODOLOGY

For purposes of this paper, literature was reviewed from the proceedings of entrepreneurship and management conferences; indices and tables of contents of entrepreneurship, management, and creativity journals; online library databases; and online listings of entrepreneurship education courses and textbooks. The field of entrepreneurship education is a relatively young one (Sexton, 1982). Since the 1970’s, there has been a huge increase in the number of articles written (for example, the USASBE online Bibliography lists 2,073 items for “Entrepreneurship Education”). The resources used primarily were those that specifically dealt with cognitive and learning needs, curriculum development and pedagogy.

THE ENTREPRENEUR AND ENTREPRENEURSHIP

Describing entrepreneurs is rather like trying to catch the wind. Entrepreneurs have been with us since recorded history, and they exist in all guises, from the farmer who is “going organic” to the golf pro who is trying to establish a golf course on the sands of war-torn Afghanistan (Watson, 2004). Academics have generally clarified the distinction between entrepreneurs and small business owners by proposing that entrepreneurs are innovators, while small business owners are not (Carland, Hoy, & Carland, 1984); however, in today’s fast-paced global economy, one might suggest that almost all business owners must innovate in order to compete.

Schumpeter, who has been referred to as the father of modern entrepreneurial thought (Winslow and Solomon, 1987), first wrote of entrepreneurs as the cause and not the effect of long-term economic progress because they seek to revolutionize the pattern of production by exploiting untired technology possibilities (Adcroft, Willis, & Dhaliwal, 2004; Baron, 1998; Lumpkin and Dess, 1996). For Schumpeter, economic growth and development are not only attributed just to the discovery of new inventions, but these innovations are followed by other innovations and imitations. The crucial factor in this process was the entrepreneur who risks financial capital in expectation for reaping profits (Anselm, 1993).

Since Schumpeter wrote of entrepreneurs as early as the 1930’s, we have seen increasing interest in the topic, until in the 1980’s when there was a veritable explosion in the number of articles, books, and manuscripts being written on all aspects of entrepreneurs, entrepreneurship, and entrepreneurship education, to include such topics as new venture funding and intrapreneurship (Hisrich, 1992). Because entrepreneurship is a young field – a field in development – researchers and writers come to very different conclusions regarding entrepreneurial characteristics and criteria, reflective of their own professional and academic disciplines and philosophies (Harrison and Leitch, 1994). “Like any fast-growing social system, entrepreneurship is multifaceted and, at its fringes, difficult to define” (Katz and Green, 1996). Kuratko (2003) echoes Katz and Green views by stating that “real maturity of the entrepreneurship field has yet to be experienced.” To date, there is no “standard, universally accepted definition of entrepreneurship” (Kirby, 2003), although many have tried and are trying to come to agreement, which will greatly advance the field.

It is becoming apparent that there is no single characteristic or behavior that can define an entrepreneur. Kirby (2003) proposes that it is more likely that there are different types of entrepreneur, each with a different personality type and attributes. Jack and Anderson (1999) are even more discouraging when it comes to succinct definitions, by noting that “entrepreneurship is an enigma, each entrepreneurship event is unique and probably idiosyncratic and the entrepreneurial process is the crystallization of complex and contingent variables.”

Opportunity Recognition and Entrepreneurship Education: A Marriage Waiting to Happen?
Solomon (as cited in Solomon and Winslow, 1988, p. 164) proposed that “an entrepreneur is an innovative person who creates something different with value (added) by devoting time and effort, assuming the financial, psychological and social risks in an action-oriented perspective and receiving the resulting rewards (and punishments) of monetary and personal satisfaction.”

Timmons (1999) notes that “entrepreneurship is a way of thinking, reasoning, and acting that is opportunity obsessed, holistic in approach, and leadership balanced.” Further, that the heart of this process is the recognition of opportunities (Timmons, Muzyka, Stevenson, & Bygrave, 1987) followed by the will and initiative to seize these opportunities (Timmons, 1999, p. 27). In other words, being an entrepreneur isn’t merely the role of business owner/founder; it is a way of thinking and being – a dynamic process. This has implications for the way we teach entrepreneurship, for we are then not only teaching the fundamentals of business practices, but are attempting to teach behaviors that are motivated by cognitive factors.

Brockhaus recommended that any research effort should begin with a definition of an entrepreneur (as cited in Sexton and Bowman, 1984). For purposes of this paper, Timmons’ definition above will be used.

ENTREPRENEURSHIP EDUCATION

As we delve into the literature on entrepreneurship education, it would be helpful to define what we mean by “entrepreneurship education.” Shepherd and Douglas (Shepherd and Douglas, 1997) propose:

The essence of entrepreneurship is the ability to envision and chart a course for a new business venture by combining information from the functional disciplines and from the external environment in the context of the extraordinary uncertainty and ambiguity which faces a new business venture. It manifests itself in creative strategies, innovative tactics, uncanny perception of trends and market mood changes, courageous leadership when the way forward is not obvious and so on. What we teach in our entrepreneurship classes should serve to instill and enhance these abilities.

Can Entrepreneurship Be Taught?

A most fundamental issue is whether entrepreneurship can be taught at all. Charharbaghi and Willis (as cited in Adcroft et al., 2004, p. 527) are skeptical, and argue that “entrepreneurs cannot be manufactured; only recognized.” Adcroft et al. (2004) go on to argue that management education can contribute to the provision of technical skills of entrepreneurs, but what it cannot contribute to is the “geographic chronology” – the element of serendipity – that is central to entrepreneurial events. Curran and Stanworth (1989) suggest that teaching entrepreneurship may not be cost-effective. Since we are not certain of the attributes and behaviors that characterize an entrepreneur, plus the evidence that entrepreneurs may be “antipathetic towards education in most forms, all tell against entrepreneurial education being resource-effective” (p. 11). Garavan and O’Cinneide (1994) partially agree with these doubts when they state: “One has to ask – what can be taught that is specific to entrepreneurial per se? There is no body of well researched and developed knowledge which might form the basis of such programs, a fact which has been consistently emphasized in the literature” (p. 6).

On the other hand, after a review of empirical studies, Gorman, Hanlon and King (1997) report that there is support that entrepreneurship can be taught, or at least encouraged, by entrepreneurship education. Anselm (1993) also suggests that entrepreneurship can be
learned. According to her, individuals may indeed be born with propensities toward entrepreneurship, but the level of entrepreneurship activity will be higher if entry-level entrepreneurial skills are taught. Kuratko (2003) put it even more succinctly: “the question of whether entrepreneurship can be taught is obsolete” (p. 12).

The lack of rigorous research on the topic of entrepreneurship education has more than a few writers concerned. For example, Brockhaus (1993, p. 9), notes that few “have done empirical research and very few have compared a group that is receiving the entrepreneurship education to another similarly matched group that is not receiving the education.” Much of the research has “tended to be fragmented and with an explanatory, descriptive orientation” (Garavan et al., 1994, p. 4).

Nevertheless, we have seen an increase in entrepreneurship education programs, and research will likely continue as the field matures. Wortman (as cited in Plaschka & Welsch, 1990) summarized the 1980’s in entrepreneurship, and the state of entrepreneurship today seems just as apt:

• A positive movement toward a commonly accepted definition of entrepreneurship and the definition of the field of entrepreneurship
• A division of entrepreneurship into individual (or independent) entrepreneurship and corporate entrepreneurship (intrapreneurship)
• A movement toward more sophisticated research designs, research methods, and statistical techniques
• A shift toward larger research designs, research methods, and statistical techniques
• A slight movement away from exploratory research toward causal research (p. 57).

Unfortunately, as reported by Gorman, et al. (1997), “there is little uniformity in the programs offered, especially if one considers the relative similarity of other business programs” (p. 70), a topic to be explored in the next sections.

**Overall “Essence” of Entrepreneurship Education:**

Entrepreneurship education programs exist, most generally, within established university business schools, and this presents a paradox that helps to explain the above-mentioned lack of uniformity in curriculum and pedagogies. Traditional business programs have come under increased criticism for failing to be relevant to the needs of today’s changing business environment (Brown, 1999). One common criticism is that business education has become too functionally oriented – that it doesn’t stress the cross-functional complexity of business problems. Other criticism focuses on the “lack of creativity and individual thinking required at both undergraduate and graduate levels” (Solomon et al., 1993). Sexton et al. (1984) note that most business school courses are highly structured and do not often pose problems which require novel solutions.

Even entrepreneurship courses fall into a left-brain-oriented trap. Bird (2002) describes many core entrepreneurship courses that:

...require students to write and present a business plan and often students (in teams limited to fellow classmates who may not be rationally chosen as partners) choose the business concepts to pursue....Problems are presented and time frames for solving them given. There is often the illusion or reality of “right answers” (p. 217).

It is also quite common for entrepreneurship classroom situations to focus heavily on theory – “either management theory being adjusted to give advice for entrepreneurship and small
business – or entrepreneurship theory explaining the emergence of entrepreneurs and their personal traits” (Blenker et al., 2003). Others echo this concern by noting that entrepreneurship programs often educate “about” entrepreneurship rather than educate “for” entrepreneurship (Blenker et al., 2003, Kirby, 2003). The essence of entrepreneurship education, then, must reflect reality.

Garavan et al. (1994) suggest that the best methods suited to an entrepreneurial learning style are active-applied and active experimentation (p. 10), and these also include concrete experience, reflective observation, and abstract conceptualization (Davies and Gibb, as cited in (Garavan and O’Cinneide, 1994). In short, “educational programs and systems should be geared toward creativity, multidisciplinary and process-oriented approaches, and theory-based practical applications. What is needed is a more proactive, problem-solving and flexible approach rather than the rigid, passive-reactive concept, and theory-emphasized functional approach” (Plaschka and Welsch, 1990, p. 61).

**Pedagogy: Teaching for Competencies:**

Competency can be defined as an underlying characteristic of a person, which results in effective and/or superior performance in a job (Boyatzis, as cited in Bird, 2002; Spencer and Spencer, as cited in Bird, 2002). As in previous sections, there is little agreement in the field about the competencies or capabilities that are most valuable for aspiring entrepreneurs to learn. Entrepreneurial educators teach for competencies; their syllabi reflect their beliefs and academic disciplines. Fiet (2000), for example, examined the syllabi of 18 entrepreneurship courses and found they covered 116 different topics; however, topics do not always reflect competencies (e.g., family business). Plaschka and Welch (1990) note that “many programs are evolving on a trial and error or as needed basis, depending on the types of entrepreneurial projects currently undertaken in the program and on the feedback of students experiencing deficiencies, gaps, and difficulties in their courses. These are not necessarily poor approaches to program development…” (p. 66).

Quite a number of researchers have written about entrepreneurial competencies, and we chose several articles to see if there were any commonalities in competencies across authors.

(Please see next page)
Table 1: Entrepreneurial Competencies from a Small Sample of Journal Articles

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*Success competencies with empirical support. Based on Working List of Entrepreneurial Competencies, Bird, 1995

**As cited in Fayolle, 1998

Note: Hisrich lists three primary categories: technical, business management, and personal entrepreneurial skills.

Note: Names of competencies may not match exactly those named in papers.

This was not meant to be a comprehensive list of competencies; in fact, it could be argued that some of the above mentioned are perhaps not behaviors at all, but traits. It is interesting to note that the two competencies above, that were cited most often, are creativity and opportunity recognition. In the 1999-2000 National Survey of Entrepreneurship Education (Solomon et al., 2002), when respondents were asked what types of courses they were offering in their educational institutions, only 4% of respondents stated they offered a Creativity Management course. Relf (1995) states: “The intense need for American firms to become more competitive have heightened the need for an increase in
creativity to develop new products, new services, and better ways of delivering existing
goods and services. Isn’t it astonishing that in most curricula, creativity is absent?”
The literature exploring opportunity recognition and its counterpart, creativity, will be
discussed in the following sections.

ENTREPRENEURIAL OPPORTUNITY RECOGNITION

The topic of opportunity recognition is an important one; after all, it represents the foundation
of a new entrepreneurial venture. A review of the literature in this area leads us to such
rubric as intuition, alertness, intentionality, cognitive processing, personality traits,
innovation, and creativity, among others; most of it is descriptive and definitional. The
authors of this literature often define the concept, expand upon it, and then tell us how
important the topic is to the discipline.

We believe the reason for a lack of consensus is that the entrepreneurship discipline doesn’t
have unified definitions of many entrepreneurship concepts, including “opportunity
recognition.” In the literature, opportunity recognition is proposed as the process or the
outcome of the process, when it is possible, we believe, that opportunity recognition is only
part of a process – the creativity process. Intuition, alertness, intention, and the other
concepts mentioned above, are components of the creativity process.

Singh, Hills, and Lumpkin (1999) define opportunity recognition as “an activity that can occur
both prior to firm founding and after firm founding throughout the life of the firm.” Although
defining entrepreneurs, Chia (1996) also gives us a good description of opportunity
recognition:

Etymologically, the term “entrepreneur” derives from two terms, entre,
meaning to “enter” or to “penetrate in between” and prendere or prehendere,
meaning to “grasp” or “seize hold of.” Therefore, the entrepreneur is one
who penetrates the spaces between established boundaries and seizes
opportunities that are otherwise overlooked by others (p. 413).

There is diverging literature about when opportunity recognition occurs. On one hand, some
researchers suggest that opportunities are “discovered.” Koller (1988), for example showed
that “most entrepreneurial ideas seem to be recognized as they appear rather than actively
sought out” (p. 203). In another study, Beattie (1999) reported that many of the
entrepreneurs he interviewed “picked up opportunities rather than ideas, and were then able
to convert the opportunities into ideas” (p. 146).

On the other hand, quite a number of researchers are calling opportunity recognition a
process. It is the authors’ contention that opportunity recognition is actually part of a larger
process, which will be discussed later in this paper.

Models of Opportunity Recognition Process:

Notwithstanding researchers who have proposed that opportunity recognition is a stand-
alone “aha” moment, it is apparent that this is a process. In a more generic sense regarding
the creative process:

Perhaps the creative process unfolds as the developmental sequence of
representational changes, from vague, syncretic, and implicit forms of
knowledge into more differentiated, integrated, and explicit ones. In more
technical terms, it is conceivable, at least, that the creative process might
operate as a developmental translation - -from an implicit code of associative
strengths among neural units into an explicit code of symbolic rules. In this
cognitive system, implicit neural networks might precede and constrain the
In 1984, Long and McMullan (1984) proposed a model of the opportunity identification process with four stages: first, is a pre-vision stage which involves both uncontrollable and controllable factors that set a person up for opportunity discovery; second, is a “point of vision” – much like the “aha” moment of discovery; third, is an “opportunity elaboration” stage to “fill in the gaps and overcome anticipated problems” with the idea; and the fourth stage is a “decision to proceed.”

Hills, Shrader, and Lumpkin (1999) suggest that opportunity recognition is a special case of the creativity process. They used Wallas’ (1926) four-stage* creativity process model as the basis for their opportunity recognition process model:

1. **Preparation**: At this first stage, the problem solver begins to gather information about the problem to be solved. Hills et al. note that this stage also refers to the background and experience that an entrepreneur brings to the opportunity recognition process.
2. **Incubation**: In this stage, gathering more information will be counterproductive. Efforts to solve the problem must be abandoned and allowed to sink into the unconscious mind. This appears to be a “mulling over” period, where the thinker has put the problem on the conscious back shelf for the moment. Hills et al. suggest that this period is typically unconscious, and is an intuitive, non-linear, nonintentional style of considering options.
3. **Insight**: Wallas referred to this style as the Illumination stage. In this stage, the problem solver suddenly experiences insight into the problem – it is the “Aha!” experience. Hills et al. suggest that there may be three different insights with regard to entrepreneurs: first, is the experience of spontaneous recognition of a business; second, would be the occasion when a person gets the idea that solves a problem that he or she has been pondering; and third, is that it represents the moment when an idea becomes available to the entrepreneur via his/her social network (p. 218).
4. **Evaluation/Verification**: This stage is when the thinker tries and checks the solution. It involves research into whether a concept will work, whether the thinker has the skills necessary, and whether it is truly novel. Hills et al. note that this is the feasibility analysis stage for entrepreneurs.
5. **Elaboration**: This is the stage when the creative idea is actualized, or put into a form ready for formal presentation. Hills et al., propose that this is stage represents the process of business planning.

* Note: ‘Wallas’ creativity model only included the first four stages; subsequent researchers, however, often included the last stage or some variation that Hills et al. have used.

Hills et al. further note that “opportunity recognition” is a staged process that involves the possibility of feedback loops from the moment of insight or the results of evaluation to greater preparation and ongoing incubation (p. 223).

**DISCUSSION AND CONCLUSION**

It would appear that entrepreneurs need certain competencies in order to enhance the probability of success of their new ventures, and one of those competencies is opportunity recognition. Opportunity recognition is primarily a cognitive process that most likely can be enhanced with training, and one of the purposes of education is to increase desired behaviors. If we look at the problem from that simplistic level, it would be possible that focused entrepreneurship education could increase the degree of the opportunity recognition competency, and hence, behavior.

 Opportunity recognition is an important component of the entrepreneurial process, and it appears to be receiving some increased attention in the last few years. It can be a little daunting trying to get a picture of the process, however, because there are what appears to
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be a multitude (relatively speaking) of voices telling us how important opportunity recognition is, what it is, and how it works. It is this “how it works” that can be particularly confusing when we read about intuition, alertness, awareness, intention, and so on. Hills et al. (1999) had it correct when they stated that opportunity recognition is a special case of the creativity process. All creativity could be said to have the goal of opportunity recognition; in the case of entrepreneurs, the goal may or may not lead to a new venture.

Below is a proposed working model of the entrepreneurial creative process:

It is based on systems and cognitive theories, as well as Wallas’ theory of the creative process. The individual brings knowledge, skills/abilities, and experience (which include memory) to the creative process. The creative process will not be reiterated here in great detail because it was discussed in the models of the opportunity recognition process above; however, additional comments are below:

- **Problem Discovery**: This stage has been separated from Wallas’/Hills et al. models, because the entrepreneur is alerted to a potential opportunity. This has also been called “problem finding,” or as Amabile (1996) calls it, “problem or task identification.” The individual is relatively passive at this stage, in terms of cognitive processing.

- **Preparation**: Focused attention, researching, intuition and intention all play a part in this stage. The entrepreneur begins “doing the research” – whether consciously or unconsciously, formally or informally. In other words, environmental scanning begins during this stage.

- **Incubation**: During much of this stage, the entrepreneur consciously engages in associations and patterning (this is where this model most differs from previous models). At this stage, divergent thinking is evident. This can be an uncomfortable time for the entrepreneur, as the cognitive processing can become almost overwhelming for the entrepreneur. It is towards the end of this stage that the entrepreneur’s unconscious takes over; he or she unconsciously continues the cognitive processes to search for the answers he/she requires. Even though the entrepreneur has put the process “on the back shelf” as stated earlier, the unconscious processing continues.

- **Illumination**: It is during this stage that insight, or opportunity recognition, occurs. In this model, opportunity recognition is synonymous with the “Aha!” moment. It is as if the entrepreneur experiences a paradigm shift (Kuhn, 1996). Convergent thinking begins.
• **Verification**: This is the stage in which the entrepreneur does a formal (and indeed, informal in many cases) feasibility evaluation. The Formal Business Plan would ideally be the outcome of this process; in any case, if the entrepreneur decides that the opportunity is a viable one, he or she begins the process of start-up.

The process in this model appears linear; it isn’t. There is constant reiteration and feedback during the process (thus, the multiple arrows from feedback on the model). All of the capabilities or competencies that have been proposed as being important to opportunity recognition are included in this model. At any time during the process, the entrepreneur may decide that the opportunity isn’t a good one, there aren’t resources available, or the time isn’t right. The social and economic environment also affects and is affected by the process; it is shown as a cloud because it is always changing. Because it is never static, it exerts differing amounts of pressure on the process. This process model does not take into account, “serendipity.” Some researchers (DeTienne and Chandler, 2004, Martello, 1995), for example, note that many discoveries appear to occur randomly or by chance. However, the entrepreneur will still go through the creativity process to cognitively determine an idea’s potential viability.

Little research has been done to date dealing with entrepreneurial behavior once entrepreneurship education has been completed – and for good reasons. Since the discipline of entrepreneurship is a young one (relative to many other fields), we are not seeing rapid convergence towards a unified theory of entrepreneurship, much less agreement on necessary competencies. Measurement issues are still major roadblock. For example, do we continue to interview or survey nascent entrepreneurs, with the related reliability and validity problems that can ensue? We have seen, in the creativity training area, just such difficulties. In the area of innovation, we are beginning to see research using number of patents or new products developed as measurement tools, but that has inherent drawbacks as well.

If opportunity recognition is a part of the creative process, as the model above proposes, it may have implications for entrepreneurship education in this area. Perhaps we should be refocusing our attention on creativity as the competency. Even though the findings for the efficacy of creativity training are not overwhelming, it would appear that progress is being made for prescriptive approach to pedagogies in this area. Specifically, we propose that entrepreneurship educators consider the following when designing their entrepreneurship courses and programs:

- Stop focusing solely on entrepreneurial functional processes (after all, these are not totally different from the functional business courses that students already receive).
- Include an introductory creativity course in their entrepreneurship program.
- Introduce creativity and the use of heuristics experientially throughout their courses.
- Relate the results of creativity experiments to specific and generalizable situations in the entrepreneurial experience.

This can also have implications for future avenues of entrepreneurship study. For example, are the creative training research and training methodologies transferable into the entrepreneurship education discipline? Can we provide classroom experiences that will be appropriate for future entrepreneurs? Are there methods we can use that will increase patterning cognitions for entrepreneurs? These are just a few questions that may provide the impetus for future research.

By examining the discipline of entrepreneurship education and its related pedagogies, it is hoped that this paper will have accomplished something in the way of providing a measure of clarity as to the issues that are relevant in the discipline and furthered the position that we must continue to refine our perspectives and research methodologies. The field is still
emerging; however, it will no doubt, continue to strive to provide the necessary tools to students so that they have a firm foundation on which to build their new ventures.
REFERENCES


