# SESSION NINE:
# NEW APPROACHES TO SAFETY TRAINING



*Fishermen in Sri Lanka* (Photo courtesy of G. Piyasena)

# STABILITY TRAINING FOR FISHERMEN: ANCHORED INSTRUCTION USING NARRATIVE THEORY AND VIDEO FOR LEARNING TRANSFER

**Capt. Barbara L. Howe, MEd , ONI (Canadian)**
**Quinte Marine Services Ltd.**
**New Westminster, British Columbia, Canada**

## Introduction

A fishing vessel capsizes. As the memorial bells toll for those who perished, the litany for more safety training resonates to the tragedy. The fishing community mourns, fishermen talk amongst themselves about what happened, and the agencies responsible for safety training for the fleet again address the conundrum of why fishermen don't seem to be getting the safety message about vessel stability.

The Canadian fishing vessel *Pacific Bandit* capsized in 1995. One fisherman perished. The Transportation Safety Board of Canada (TSB) recommended that the "Department of Transport, in conjunction with other government departments, agencies, and organizations immediately undertake a safety promotion program for operators and crews of small fishing vessels to increase their awareness of the effects of unsafe operating practices on vessel stability" (TSB M95W0005).

In 1997, the *Pacific Charmer* capsized during a herring opening. Two fishermen perished. The TSB Marine Occurrence Report resulted in changes to the Department of Fisheries (DOF) entry conditions for future vessel selection lotteries for targeted fisheries. In particular, the conditions for entry incorporated requirements regarding the certification of vessel operators (TSB M97W-236).

In a paper presented at SARSCENE about the loss of the *Pacific Charmer*, it was suggested that "educators should focus on the way people construe the world differently, and develop educational concepts and processes tailored to the multiple realities inhabited by fishermen" (Boshier, 1999, p. 70). Boshier located these realities in four conceptual frameworks–functionalist, human-

ist, radical humanist, and radical structuralist. He argues that using these perspectives to examine fishing vessel incidents is informing with education, rather than "de-contextualized training" and concludes that if continued training efforts are "more of the same, it is a waste of time."

The *Cap Rouge II* capsized in August of 2002. Five persons perished. The TSB report on this incident is in its final stages of completion. It will likely contain recommendations encouraging cooperation among operators of small fishing vessels, government regulators, and marine educators to create an everyday reality where stability is a central and routine consideration in making any decision affecting a fishing vessel's movement and operations.

There would seem to be little disagreement about the need for stability training and education. Whether it be stability awareness efforts with pamphlets, formal certification programs, education nested in complex sociological paradigms, or an every day central focus on stability and fishing vessel operations –the way stability information has been presented to fishermen up until now has not substantially reduced the number of capsized vessels.

## A complex problem

Why existing stability training and safety awareness efforts do not seem to be working is a complex problem that, among other factors, involves the interrelationship among fishermen, traditional training methods, and the learning environment. More attention needs to be directed at investigating how people, structure, and culture interact to form a learning context (Merriam and Caffarella 1991).

The fishing industry is typified by rugged individualism. There is an apparent discomfort with the educational setting and a natural reluctance on the part of fishermen to attend formal training (Petursdottir, Hannibalsson and Turner 2001). Fishermen have been described as being outside mainstream culture (National Research Council 1991). Not only are they outside mainstream culture, but the literature suggests that commercial fishing is its own culture, subculture, or community (Anderson and Wadel 1972; Barth 1966; De Santis 1984; Knudsen 1987; Orbach 1977; Pollnac, Poggie, and VanDusen 1995). The individualism inherent to fishermen is not likely to change; it is part of the culture of the commercial fishing industry.

This could in part explain discomfort in traditional educational settings and reluctance to attend training programs. Simply stated, there is a "disconnect" between fishermen's cultural reality and ways of knowing, and mainstream teacher-centered training offered in rectangular classrooms with fluorescent lighting. Adult education needs to be culturally relevant. It has been suggested that "effective learning…demands that adult educators reorient educational practices to incorporate learners' culture into the educational process" (Guy 1999, p. 16). Incorporating cultural aspects in the educational process is to establish an authentic context to the learning experience.

The need to include cultural aspects in the educational process is described by Petursdottir, Hannibalsson, and Turner (2001), who state that "any mandatory [training] programme is likely to be resented, resisted and probably will fail unless it has the support and involvement of fishermen. It is important to offer the training in a realistic environment involving the fishermen in hands-on participation with active feedback" (p. 17). This kind of training is learner focused, exploratory, and interactive with less emphasis on the instructor providing knowledge.

Required training programs traditionally consist of curriculum designed by "experts," presented in lectures, overhead transparencies (now being replaced by PowerPoint), textbooks, workbooks, and videos. What is noticeably missing is the active involvement of fishermen.

"Many training videos are simply lectures transferred to a video format in an attempt to provide information to students" (Learning Technology Center 1992, p. 1). These videos are generally de-contextualized representations of facts and bear little relationship to learners' lives.

Teaching materials and methods that do not relate to learners' life experiences become irrelevant and ineffective in facilitating learning (Guy 1999). Classroom learning is substantially different from a natural learning environment. To contextualize training and education, there needs to be a connection with the fishing culture and the life experience of fishermen. An experience-based pedagogy where fishermen connect new knowledge with lived experience can be facilitated by the use of narrative.

This paper suggests that a narrative perspective can be used in the classroom and with videos to promote involvement and relevance and to create a realistic contextual milieu for learning. Narrative is a way for the fishing culture to

be incorporated in the educational process and make subject matter relevant to fishermen. A stability course or training program for fishermen using narrative to shape content, method, and learning transfer will be discussed.

## The narrative perspective

"Narrative and stories in education have been the focus of increasing attention in recent years" (Rossiter 2002, p. 1). The adult education research community has shown a growing interest in understanding narrative as a basic way of knowing and teaching. There is a recognition of the importance of narrative as a means of informing educational practice (McEwan and Egan 1995). We can begin to appreciate the importance and role of stories in teaching and learning when we recognize how central narrative is to our lives. This section will discuss how the narrative perspective relates to culture, the individual, and learning.

In the broadest sense, culture is a way of making sense of experience nested in shared history. The language of a culture mediates the defining common beliefs, values, customs, acceptable behaviors, and social organization in a meaningful way. Bruner (1986) suggests that we frame these cultural meanings in story form and narrative.

The agnatic nature of commercial fishing allows stories of practical actions and expected outcomes to be passed down through generations by natural learning that takes place in the context of the activity. Tradition and continuity of practice in the commercial fishing industry is embedded in the narrative process of telling how it was and how it is now. When a fisherman answers a question about why they did something the way they did, often the answer is "because we've always done it that way."

This is not an excuse, but rather an *explanation* that reflects a manner of knowing in a legitimate cultural way. Cultural narratives communicate and conserve shared meanings. To participate in a culture is to know and use a range of accumulated and shared meanings (McKewan and Egan 1995). Those who do not belong to the fishing culture but who attempt to encourage fishermen to act differently are confounded by this embedded cultural way of knowing that seems to defy statistical reason and logic sourced in a techno-rational cultural context.

The narrative and its link to shared meanings in a cultural context defines a broad legitimacy of action.  Personal narrative, or the telling of stories, is a way people make sense of and give meaning to their life experience. The way we present our personal life with narrative is a particular interpretation of events and experiences which represents the most coherent and satisfactory account (Rossiter 1999).  Bruner suggests that "we represent our lives to ourselves as well as to others in the form of narrative" (1986, p. 40).  As we change over time, we construct our narrative to reflect new insights, perspectives, and acquired knowledge.

> Fishermen tell compelling stories about the seas and the near misses and the financial bonanza years.  These narratives are rich with individual perceptions of how events came to be.  It has been said that "to be a person is to have a story… more than that, it is to *be* a story" (Kenyon and Randall 1997, p. 1).

Narrative accounts, whether from the broad cultural realm or an individual experiential story, can provide a basis for learning. "Given the centrality of narrative in the human experience, we can begin to appreciate the power of stories in teaching and learning" (Rossiter 2002, p. 1).  Educators need to listen to fishermen's narratives. These stories can reveal significant gaps in knowledge and understanding of stability principles.

Stability information that informs needs to be presented in a way that allows fishermen to make a connection with their existing personal narrative of meaning from experience. As teachers, it is important to leave interpretive space to the learner and allow them to interact with the subject matter in a way that is compatible with their constructed sense of self and understanding.  Rossiter argues that "to tell too much, to provide the answers to all questions spoken and anticipated, is to render the active engagement of the learner unecessary" (2002, p. 2).

Narrative, or story telling, is significant in terms of cultural identity, and can be used to capture teachable moments and allow learners to fill gaps in their personal narrative of knowing with new information and knowledge.  Involvement in the learning process and participation in learning activities can be realized by allowing stories to be told.  Clark states that "the challenge…is to expand our understanding of narrative and explore exactly how narrative can both facilitate and explain the learning process" (2001, p. 89).

One way that challenge has been put into education practice is with Anchored Instruction, which uses narrative as the locus of its theoretical framework.

## Anchored Instruction: Theoretical framework

Theoretical frameworks that inform adult education provide an orientation to help investigate and direct how learning takes place. Narrative theory and its relevance to teaching and learning is pivotal to Anchored Instruction, a theoretical framework developed by the Cognition and Technology Group at Vanderbilt University (CTGV) in the late 1980s.

Their investigation began by asking two groups of students to read text containing technical information. The first group was asked to just read the text, and the second group was asked to read it as though they were planning a trip down the Amazon River. The first group could only recall vague information from what they read. The second group was able to remember specific details from the text passage. The significance of this was the demonstrated effect of contextualized learning and the importance of presenting information in a natural setting rather than as isolated facts.

Anchored Instruction is a paradigm for technology-based learning that uses stories, rather than lectures, to provide a macro-context for teaching and learning. The macro-context narrative, which is the "anchor," is a problem-based story presented in a video that is interesting, believable, and relevant to real-world situations (CTGV 1993). Students are asked to solve problems contained in the context of the video narrative. This is accomplished by having students play authentic roles while investigating a situation—identifying gaps in their knowledge, researching information needed to solve the problem, and developing solutions. The teacher is a facilitator and coach for student problem-solving activities.

This methodology offers an environment where learning is contextualized to enhance transferability of knowledge and encourage ownership of learning. The CTGV developed a series of interactive videos called "The Adventures of Jasper Woodbury." Each video episode is a realistic story that culminates in a challenge to be solved rather than a resolution to the story. Information on how to solve the problems posed in the videos is embedded in the story. Students are able to take the embedded information and facts and transform

the "mere facts" into valuable knowledge shaped as conceptual problem-solving tools.

The Jasper videos are designed to bridge the gap between natural learning and classroom learning (CTGV 1993). The narrative is an "anchor" that provides a common frame of reference for the learners and the teacher and thus resembles the contextual element of natural learning. The tasks the learners perform are considered to be authentic because they are contained in and arise naturally from the context of the narrative. The knowledge learned is a tool to accomplish the tasks and allows the learner to see the knowledge as valuable, useful, and transferable to other situations.

In traditional training programs "students rarely see the knowledge they learn in class as a tool to solve real-world problems…and often view it as 'school knowledge' and unrelated to their world" (Learning Technology Center 1992, p. 2). This is in part because the cultural background of teachers and learners is often substantially different, and they do not share a common narrative or context for problem solving. Nor do traditional training videos establish an authentic common context with the viewers. When a video is finished, there is nothing to compel the viewer to transport the information in the video into their real world.

Research findings on the Jasper Woodbury videos indicated that Jasper students "performed as well or better on standardized tests, even though the Jasper classes had spent 3 or 4 weeks less on the regular math curriculum. Jasper students scored much higher on planning and subgoal comprehension problems than their control counterparts" (see peabody.vanderbilt.edu/results).

In summary, the underpinning principles of Anchored Instruction are that

1.  An anchor should be used to design learning and teaching activities and the activities should be some sort of case study or problem-solving situation that frames the learning in a realistic and authentic setting.
2.  Curriculum materials should allow exploration, questioning and involvement by learners, e.g., narratives contained in interactive videos.
3.  As a theoretical framework that informs practice, Anchored Instruction and the use of narrative offers interesting insights and valuable potential for teaching stability to fishermen.

## "Da Vinci's Inquest" – A video

I spoke at the beginning of this paper about the capsizing of the *Pacific Charmer*. A short time after that incident the award-winning British Columbia television series "Da Vinci's Inquest" aired an episode loosely based on the *Pacific Charmer*. The video is about the capsizing of the fictional fishing vessel *Provider Quest*. It presents technically correct stability information and also captures fishermen's cultural and personal perceptions associated with stability and commercial fishing. This paper suggests that it is difficult to separate the commercial fishing culture from principles of fishing vessel stability. As the narrative of "Da Vinci's Inquest" shows, they are authentically blended.

Following is a list of stability (bold), cultural (italics), and safety/other issues that are evident in "Da Vinci's Inquest." They are in the approximate order they appear in the video.

> *Centers of experience, grandfather, father, and son*
> EPIRBs and response time by search and rescue
> The role of investigative bodies, the Transportation Safety Board
> *Wife of a casualty looking at her husband in a body bag*
> The role of a union safety representative
> *What kind of a guy was the skipper*
> *Was he competent*
> Skipper's boat burned and that is why he is running a company-owned vessel
> Death by drowning or hypothermia
> *Was alcohol a factor*
> One man missing and presumed drowned
> *If you haven't fished you don't understand what it's all about*
> **All the hatches were open**
> **Seals on the hatches were worn**
> **The lazarette was open**
> **Engine room door was open**
> **Scuppers were blocked by gear**
> **The throttle was open with 30 degrees to port**
> *Fishing means that tragedies occur*
> *Skipper's idea to take on another load*
> Quota system
> **Stability data book for sister ship**

**The drum was heavier and higher on deck than the one on the sister ship**
**Vessel heeled to starboard**
The water was so cold and I couldn't breath
*Human error*
I heard pounding from the overturned hull
It's almost impossible to put a survival suit on in the water
Survival suits–two in fair condition, one hooped
**We rolled in seconds**
*We worked 18-20 hours a day*
**Doors were open that allowed for down-flooding**
*We have a healthy respect for the sea*
**What does the inclining experiment tell us**
**Center of gravity and how it moves**
**What do the guidelines in the stability book tell us**
**The boat always had buoyancy**
**This time the vessel felt sluggish**
*The "old man" knew the vessel was sluggish to return to the upright*
**We always left the doors below open–can't be opening and closing all the time**
*The "old man" doesn't always tell us everything*
**The "old man" thought something was wrong after the last refit**
*We were broke and needed the money*
Survival suits were stowed in the crew quarters
*Superstition–do something a 1000 times and one time your luck doesn't hold*
*Grampa wouldn't do anything to put us at harm*
*Fishing is about families*
*I never even wanted to be on the boat*

After listening to the narrative accounts of the capsizing given in "Da Vinci's Inquest," the inquest jury concluded that no one thing caused the capsizing and that it was an accident. It is apparent why a jury would have difficulty isolating a specific cause from the blended narrative that introduces a number of possible contributing factors.

The narrative "Da Vinci's Inquest" talks about important principles of stability and also raises several culturally embedded aspects of commercial fishing that are not quantifiable. What is not quantifiable relies on the context of the whole narrative for meaning. It is precisely this holistic aspect of "Da

Vinci's Inquest" that makes it a realistic, plausible explanation of the multiple factors that led to the capsizing of the *Provider Quest* in the video. Or, perhaps, to the capsize of the *Pacific Charmer*.

"Da Vinci's Inquest" is a narrative that can educate fishermen about stability. It is captivating, believable, and introduces stability terms and principles in an authentic and realistic context. The cultural issues that the video raises will not be unfamiliar to most fishermen. This fictional narrative provides a contextual framework of operating practice through which fishermen can actively and authentically investigate fishing vessel stability.

## Implications for teaching

"Da Vinci's Inquest" is not a CTVG Anchored Instruction video with embedded information designed for problem-solving activities. However, any of the issues identified in the video can provide an "anchor" for stability problem solving activities. Here are some suggestions.

Facilitate the exploration of stability with fishermen by allowing time for them to tell their own personal stories about stability experiences and general knowledge about stability principles. Their stories will reflect how they make sense of and give meaning to their experiences with fishing vessel stability.

Before showing "Da Vinci's Inquest," explain that it is loosely based on the capsizing of the *Pacific Charmer*. If relevant, ask what the fishermen know about the *Pacific Charmer* and discuss what they perceive might have been the possible causes of the incident.

Suggest that as they watch "Da Vinci's Inquest," they listen for things that they can personally identify with. After watching the video, let the fishermen deconstruct the overall narrative in terms of what they believe was the cause(s) of the capsizing. Listen to fishermen and loosely categorize what they say into a few general topics. These topics can reflect shared beliefs about stability and the culture of fishing. For each topic identified, ask problem-solving questions. For example, they may be "what if"-type questions that focus the lens of exploration from different angles and help to reveal what lies below the first layer of perception. Or a question might be "how would you have handled that situation if it happened on the boat you work on." Answers to this kind of questioning can reveal multiple perceptions.

The next session might be on the inclining experiment. Watch that segment of the video again and note how the inclining experiment has contextual significance—why was Da Vinci interested in the inclining experiment? The purpose of the inclining experiment in general terms is to find where the center of gravity of the vessel is in relationship to the keel. Introduce basic terms necessary to explain the purpose and usefulness to a skipper that the information from the inclining experiment provides.

If possible, go to a shipyard and as a group conduct an inclining experiment on a fishing vessel with the help of a naval architect. The relevant real-world information that is useful is where the vessel's lightship KG is, not how it is derived mathematically. Afterward, have stability books available and explain that the page describing the inclining test is the documentation of what the fishermen just participated in. Replay the section in "Da Vinci's Inquest" that talks about the stability book and discuss the concept of sister ships and why in time they may no longer be stability sisters.

As a facilitator, there are any number of ways one can use "Da Vinci's Inquest" to teach fishing vessel stability using Anchored Instruction. One problem-solving activity could be "anchored" in what fishermen understand "human error" to be. Or ask the fishermen what they interpret "if you haven't fished, you don't understand what it's all about" to mean.

Other anchors the video provides are "the vessel felt sluggish," and "we rolled in seconds." Investigate the meaning of GM and how this value relates to stiff and tender ships. What would have caused the vessel to be sluggish, and what could have been done to make it less so? The plugged scuppers and open engine room and lazarette doors provide an anchor for learning about the very real danger of free surface.

Stability incidents are seldom caused by one factor. Generally the causes are multiple and the effect cumulative. After the first viewing of "Da Vinci's Inquest," fishermen were asked what they thought caused the capsizing. At the conclusion of Anchored Instruction stability training using the narrative "Da Vinci's Inquest," watch the entire video again. Once again pose the original question to the fishermen–what do you think caused the capsizing of the *Provider Quest*. This activity can reinforce the cumulative nature of instability occurrences and may bring some interesting changes in responses that reflect transfer of learning about stability principles.

"Da Vinci's Inquest" provides many anchors for problem-based and participatory learning activities about fishing vessel stability and cultural issues that can have an impact on stability. To use it effectively, educators will need to set lecture notes aside, pull up a chair, and start listening to the fishermen.

## Limitations of Anchored Instruction

One of the limitations of Anchored Instruction as designed by CTGV is that it requires carefully produced videos that contain embedded facts and information that can be used in authentic problem solving activities. The narrative video "Da Vinci's Inquest" was not produced with that purpose. Nonetheless it provides "anchors" for instruction of vessel stability for fishermen in a theoretical framework for learning that is an alternative to traditional training perspectives.

It is a reality that regardless of what theoretical framework and teaching perspective guides a teacher's practice, the curriculum is likely to come from elsewhere, teaching resources are limited, and there is little time for course development. It is not uncommon to find that instruction is to enable students to pass examinations such as those required for many certificate programs. Anchored Instruction that develops real-world problem-solving abilities may not prepare a fisherman to answer multiple-choice questions that only measure recognition and recall and not real-life problem-solving abilities.

Pedagogical content knowledge, that is, a teacher's way of knowing the subject matter and the value they assign to the content, can limit the effective use of Anchored Instruction. A nautical instructor with a deep-sea background might emphasize longitudinal stability calculations as they relate to loading a 150-meter cargo vessel because that is the way stability has been useful to him. However, longitudinal stability is less critical for a 15-meter fishing vessel. More important to a small fishing vessel is transverse stability, particularly because the vessel loads at sea and not alongside a dock.

A teacher with no knowledge of commercial fishing may find facilitating Anchored Instruction with fishermen difficult and experience problems being authentically responsive to fishermen's personal narratives.

# Discussion

The field of adult education is diverse and guided by ongoing research. Research findings reshape existing theories of learning and practice, and this in turn reshapes classroom experiences.

Research using narrative analysis has been used to examine fishermen's individual perceptions of risk and risk-taking as part of the culture of commercial fishing (Acheson 2002; Murray 2002).

If the narratives from research can inform us about how fishermen perceive their world, perhaps an exploration of their own narrative constructs can help them better understand their personal need for more information and knowledge about fishing vessel stability. Anchored Instruction is an enabling theoretical framework that can allow fishermen to examine their stories and identify information gaps—and then fill the gaps with useful, real-world knowledge.

Further research is necessary to determine whether learning transfer of stability principles within the culture of commercial fishing can be enhanced by Anchored Instruction rather than the traditional teacher-focused programs that are the current practice.

There is no question that engendering a sound understanding of fishing vessel stability presents a major challenge for government regulators, educators, and fishermen.

The importance of that challenge is immediately evident whenever a skipper is faced with an on-the-spot decision whether or not to haul aboard one last net full of fish when he knows that the vessel beneath him is already struggling to remain upright.

Let's hope for the skipper's sake, for the sake of his crew, family, and community that he has really learned stability principles and is able to use his knowledge to ensure that he and his crew will be around to fish tomorrow, and for years to come.

## Acknowledgments

## References

Acheson V (2002). Fisher's attributed causes of accidents and implications for prevention education. *In* Proceedings of the International Fishing Industry Safety and Health Conference (Woods Hole, Massachusetts, Oct. 23-25, 2000), Lincoln JM, Hudson DS et al., eds. Cincinnati, OH: National Institute for Occupational Safety and Health. DHHS (NIOSH) Pub. No. 2002-147.

Anderson R and Wadel C (1972). Anthropological essays on modern fishing. Newfoundland Social and Economic Papers No. 5. Memorial University of Newfoundland.

Barth F (1966). Models of social organization. Royal Anthropological Intitute Occasional Paper No. 23. Royal Anthropological Institute of Great Britian and Ireland.

Boshier R (1990). Dying to fish, fishing to die: Society, culture and accident prevention. Presentation at SARSCENE, St. Johns, Newfoundland.

Bruner J (1986). Actual minds, possible worlds. Cambridge: Harvard University Press.

Clark MC (2001). Off the beaten path: Some creative approaches to adult learning. *Adult and Continuing Education* 89.

Cognition and Technology Group (Vanderbilt University, Nashville, TN) (1993). Anchored Instruction and situated cognition revisited. *Educational Technology* March.

De Santis M (1984). Neptune's apprentice. Novato, CA: Presidio Press.

Guy TC (1999). Culture as context for adult education: The need for culturally relevant education. New Directions for Adult and Continuing Education (Summer).

Kenyon GM and Randall WL (1997). Restorying our lives: personal growth through autobiographical reflection. Westport, CT: Praeger.

Knudsen P (1987). You take serious what's said in play: Systematic distortion of communication on a fishing boat. Ann Arbor, MI: University of Michigan.

Learning Technology Center (1992). Nashville, TN: Vanderbilt University.

McEwan H and Egan K (1995). Narrative in teaching, learning and research. New York: Teachers College Press.

Merriam SB and Caffarella RS (1991). Learning in adulthood. San Francisco: Jossey-Bass.

Murray M (2002). The use of narrative theory in understanding and preventing accidents in the fishing industry. *In* Proceedings of the International Fishing Industry Safety and Health Conference (Woods Hole, Massachusetts, Oct. 23-25, 2000), Lincoln JM, Hudson DS et al., eds. Cincinnati, OH: National Institute for Occupational Safety and Health. DHHS (NIOSH) Pub. No. 2002-147.

National Research Council (1991). Fishing vessel Safety: Blueprint for a national program. Washington, DC: National Academy Press.

Orbach MK (1997). Hunters, seamen, and entrepreneurs: The tuna seinermen of San Diego. Berkeley: University of California Press.

Petursdottir G, Hannibalsson O , and Turner J (2001). Safety at sea as an integral part of fisheries management. Rome: Food and Agriculture Organization.

Pollnac RG, Poggie JJ, and Van Dusen (1995). Cultural adaptations to dander and the safety of commercial oceanic fishermen. *Human Organization* 52(2).

Rossiter M (1999). A narrative approach to development: implications for adult education. *Adult Education Quarterly* 99(50).

Rossiter M (2002). Narrative and stories in adult teaching and learning. *ERIC Digest*, 241.

Transportation Safety Board of Canada (1995). Sinking of the fishing vessel *Pacific Bandit*.

Transportation Safety Board of Canada (1997). Sinking *Pacific Charmer*, Pylades Channel.