

1998

Validating Predictors to Determine Optimal Adventure in Whitewater Kayaking

Chris D. Jones
West Virginia University

Steven J. Hollenhurst
West Virginia University

Follow this and additional works at: <https://digitalcommons.cortland.edu/reseoutded>



Part of the [Environmental Education Commons](#), and the [Leisure Studies Commons](#)

Recommended Citation

Jones, Chris D. and Hollenhurst, Steven J. (1998) "Validating Predictors to Determine Optimal Adventure in Whitewater Kayaking," *Research in Outdoor Education*: Vol. 4, Article 9.

Available at: <https://digitalcommons.cortland.edu/reseoutded/vol4/iss1/9>

This Article is brought to you for free and open access by Digital Commons @ Cortland. It has been accepted for inclusion in Research in Outdoor Education by an authorized editor of Digital Commons @ Cortland. For more information, please contact DigitalCommonsSubmissions@cortland.edu.

VALIDATING PREDICTORS TO DETERMINE OPTIMAL ADVENTURE IN WHITEWATER KAYAKING

Christopher D. Jones

Division of Forestry,

West Virginia University

Steven J. Hollenhorst

Division of Forestry,

West Virginia University

Understanding the role of “flow” experiences has been an emerging topic of research in adventure recreation/education. A number of recent studies have evaluated these optimal experiences in terms of the effects of more structured educational environments rather than the effects of unstructured, on-site conditions of adventure. Previous studies have modified Csikszentmihalyi’s theoretical model of flow to assess adventure experiences (e.g., peak adventure) in outdoor education settings (Martin and Priest, 1986; Priest and Bunting, 1993). However, despite these modifications of the theoretical model, there has been little effort to evaluate the validity of Csikszentmihalyi’s (1975, 1990) conceptual framework relative to the experience of adventure. The negligible number of empirical investigations in adventure settings leaves questions unanswered regarding the validity and effectiveness of predictors (e.g. challenge-skill, risk-competence) of optimal adventure.

As a result, this study attempts to validate predictors of optimal adventure within an on-site whitewater kayaking setting using a modification of the Experience Sampling Method (ESM). Based on the flow theory and Martin and Priest’s (1986) Adventure Experience Paradigm, it was expected that measures of challenge-skill and risk-competence would be correlated and predict indicators of an optimal or peak adventure experience. Additionally, it was expected that differences would be found in the levels of perceived challenge and risk according to the difficulty of river stages.

Surveys were administered on-site in the Cheat River Canyon in West Virginia to 52 whitewater kayakers at eight stages based on varying levels of river difficulty. Data was analyzed at the level of experience ($n = 409$) rather than the subject. A-priori hypothesis testing, based on key statistical analyses (correlations, linear regression, and repeated ANOVA), supported the convergent and ecological validity of predictors of optimal adventure. However, the explanatory power of these predictors, while higher than that reported in studies of daily experience, indicates a need for further development of models attempting to assess the concept of optimal adventure.

References

- Beck, L. (1987). The phenomenology of optimal experiences attained by whitewater river recreationists in Canyonlands National Park, Utah. *Abstracts of the proceedings of the 10th Anniversary Leisure Research Symposium*. New Orleans, Louisiana.
- Borrie, W. (1995). *Measuring the multiple, deep, and unfolding aspects of the wilderness experience using the experience sampling method*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. San Francisco: Jossey-Bass.

Csikszentmihalyi, M. and Csikszentmihalyi, I. (1988). *Optimal experience: Psychological studies of flow in consciousness*. NY: Cambridge Press.

Csikszentmihalyi, M. and Csikszentmihalyi, I. (1990). Adventure and the flow experience. In Miles and Priest (Ed.), *Adventure Education* (pp. 149-146). State College, PA: Venture Publishing, Inc.

Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. NY: Harper & Row.

Csikszentmihalyi, M. and Larson, R. (1987). Validity and reliability of the experience sampling method. *Journal of Nervous and Mental Disease*, 175(9), 526-536.

Dustin, D., McAvoy, L. and Beck, L. (1986). Promoting recreationist self-sufficiency. *Journal of Parks and Recreation Administration*, 4(4), 43-52.

Ellis, G., Voelkl, J., and Morris, C. (1994). Measurement and analysis issues with explanation of variance in daily experience using the flow model. *Journal of Leisure Research*, 26(4), 337-356.

Ewert, A. (1994). Playing the edge: motivation and risk taking in a high-altitude wildernesslike environment. *Environment and Behavior*, 26(1), 3-24.

Ewert, A. & Hollenhorst, S. (1989). Testing the adventure model: Empirical support for a model of risk recreation participation. *Journal of Leisure Research*, 21, 124-139.

Hull, R., Michael, S., Walker, G., and Roggenbuck, J. (1996). Ebb and flow of brief leisure experiences. *Leisure Sciences*, 18, 299-314.

Hull, R., Stewart, W., and Yi, Y. (1992). Experience patterns, explaining the dynamic nature of a recreation experience. *Journal of Leisure Research*, 24, 240-252.

Kiess, H. and Bloomquist, D. (1985). *Psychological research methods: A conceptual approach*. Newton, MA: Allyn and Bacon, Inc.

Larson, R. and Csikszentmihalyi, M. (1983). The experience sampling method. In H.T. Reis (Ed.) *Naturalistic approaches to studying social interaction* (pp.41-56). San Francisco: Jossey-Bass.

Larson, R. and Delespaul, P. (1990). Analyzing experience sampling data: A guidebook for the perplexed. In M. deVries (Ed.), *The experience of psychopathology*. Cambridge University Press.

Martin, P. and Priest, S. (1986). Understanding the adventure experience. *Journal of Adventure Education*, 3(1), 18-21.

Moneta, G., Csikszentmihalyi, M. (1996). The effect of perceived challenges and skills on the quality of subjective experience. *Journal of Personality*, 64(2), 276-310.

Priest, S. and Bunting, C. (1993). Changes in perceived risk and competence during whitewater canoeing. *Journal of Applied Recreation Research*, 18(4), 265-280.

The study was a portion of a doctoral dissertation for the first author. Support for the study was provided in part by a grant from the West Virginia Department of Natural Resources. Christopher D. Jones, Doctoral Candidate, Division of Forestry, West Virginia University, 218 Percival Hall, Morgantown, West Virginia 26506. E-mail: cjones4@wvu.edu