

Learning First

In

Higher Education

Aaron N. Moen

Comments from former students...

This book describes a learning environment unlike any other I encountered in college. The shared learning among undergraduates, graduate students and faculty gave me new perspectives on teaching philosophies. I gained a solid academic background while developing technical writing, editing, and public speaking skills. The team leadership and project participation opportunities have been invaluable in my career. (DM, consulting firm)

As a graduate student I found the interdisciplinary approach described in this book to be vibrant and invigorating. All students, freshman through doctoral candidates, were challenged to learn to solve problems and create knowledge together. Professor Moen's approach to education prepared students to be life-long learners. (MR, federal ecologist)

I learned from Professor Moen that I was responsible for my own learning, for finding information, evaluating it, and using it properly. I didn't know how to handle this at first but now I credit my experience in this learning environment for success in my career. (KH, research associate)

The learning environment described in this book gave students meaningful opportunities to apply what they learned by working with and teaching other students. These opportunities made students responsible for their learning while providing opportunities to practice the cooperative skills needed as professionals. (RK, law student)

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Contents

<i>Contents</i>	<i>iii</i>
<i>Preface</i>	<i>iv</i>
<i>Acknowledgements</i>	<i>vi</i>
<i>About the Author</i>	<i>vii</i>
<i>Chapter 1: Learning First</i>	<i>1</i>
<i>Chapter 2: Learning to Learn</i>	<i>13</i>
<i>Chapter 3: Learning to Teach</i>	<i>21</i>
<i>Chapter 4: Learning to Interact</i>	<i>29</i>
<i>Chapter 5: Learning to Integrate</i>	<i>39</i>
<i>Chapter 6: Knowledge is Powerful</i>	<i>49</i>
<i>Chapter 7: Sharing Knowledge by Publishing</i>	<i>61</i>
<i>Chapter 8: Cooperative Learning</i>	<i>77</i>
<i>Chapter 9: A Course Continuum</i>	<i>95</i>
<i>Chapter 10: Making the Commitment</i>	<i>111</i>
<i>Chapter 11: Making the Transition</i>	<i>123</i>
<i>Chapter 12: Life-long Learning</i>	<i>147</i>
<i>References Cited</i>	<i>151</i>
<i>Index</i>	<i>155</i>

PREFACE

This book is the writing of a practicing educator for 40 years. After 5 years of high school teaching, I joined the faculty of Cornell University in 1967 and began doing what most professors did ...give lectures. When course enrollment increased from 30 to over 150 in four years, I might have felt successful but instead I felt frustrated. I was lecturing to the students but I was not working with them. After returning from a sabbatical in 1974 I changed the format of my course in wildlife ecology and set up a little learning center with programmable calculators. That was the beginning of 25 years of experimenting with higher education that culminated in the design of a Cooperative Learning Center in the Department of Natural Resources in the 1990's.

This book shares some philosophy, experiences and conclusions accumulated since graduating from college in 1958. The conclusion that looms the largest is that *"learners are happiest when they are actively involved in meaningful learning experiences."*

As a competitive self-motivated learner, it took me many years to realize that learning is a social experience learning for most people. When I began to discuss learning philosophies with my two most valuable colleagues—my wife and our daughter, both of whom were elementary school teachers—I began to realize that first graders and college students are not very different when it comes to basic learning premises. *Whatever the age, we all learn best when we are actively involved in and assume responsibility for our own learning.*

I hope this book will help identify some of the characteristics of a learning environment that make learning fun and rewarding. I also want to share with readers my observation that college students are far more capable of learning on their own and with others than they generally get credit for. They are not empty vessels to be filled, but are ready and willing to be productive learners willing to share their knowledge with others.

With the appearance of powerful desktop computers, students can write better and solve more complex problems than ever before, and they should learn to share their knowledge with others. A technological revolution has taken place and I was an early adopter. Educators must be careful, however, to use the computer to enhance thinking and promote creativity rather than doing the same things that were done in the last century only “slicker and quicker.”

We now live in the information age and that requires new approaches to education at all levels. The information processing power we now have at our disposal is so powerful and became available so fast, educators cannot be expected to use it to its full advantage yet. *We will all have to become life-long learners in the 21st century.*

Acknowledgements

I first want to thank my education-oriented family for surrounding me with positive attitudes about learning. Having parents encourage me to learn both naturally and formally, three sisters and a brother-in-law in education, a wife and daughter who were elementary school teachers, and having four children with one or more advanced degrees...learning is what we do. I have learned much about computers, modeling, and resource ecology and management from our three sons. I also want to thank Lindy Kubecka for editorial assistance as this book was prepared in final form. I am also grateful for the freedom and flexibility to experiment while a professor at Cornell University. Some things worked and some didn't, but failures are stepping-stones to success. My graduate teaching assistant, G. Scott Boomer, and my two other graduate students in the 1990's, Michael Runge and Jennifer Fazzari, contributed greatly to the success of this learning environment. I especially want to thank the many undergraduate students who not only embraced a new learning paradigm but also contributed to its success by their participation as productive students and undergraduate teaching assistants. I would like to name each one of you individually, but every undergraduate contributed to my thinking and to the learning environment, and each one of you knows who you are. Going back further in time, it is appropriate to acknowledge the students who I had in junior and senior high school 40 years ago because they too contributed to my practicing the arts of teaching and learning. Reviewing the changes in my perspectives over the years, they can be summed up by...

learning first and teaching second.

About the Author

Dr. Aaron Moen, Professor Emeritus at Cornell University, began his career as a junior and senior high school teacher in Minnesota in 1958. He joined the faculty of Cornell University as an Assistant Professor in 1967 and retired in 1998. He holds a B.S. degree from Gustavus Adolphus College (1958), the M.S. degree from State Cloud State University (1963), and a Ph.D. from the University of Minnesota (1966). Dr. Moen was elected to membership in Kappa Delta Pi and Gamma Sigma Delta, and received the Distinguished Alumnus in Education award from his undergraduate institution in 1985 and the Innovative Teacher award in 1995 from the College of Agriculture and Life Sciences, Cornell University. Dr. Moen has spoken at a number of universities, has presented papers at education and wildlife conferences in the U.S. and several foreign countries, and has authored or co-authored over 90 scientific and technical papers, a wildlife ecology text, and a 7-part series on The Biology and Management of Wild Ruminants. Professor Moen designed a Cooperative Learning Center in the Cornell's Department of Natural Resources in the 1990's, incorporating cooperative learning into a course continuum while using desktop computers to enhance student creativity and productivity. *His main goal as a professor was the professional development of undergraduates in a learning environment that promoted thinking, instilled confidence and developed problem-solving skills by providing students with professional-level experiences before they graduated and became life-long learners.*