Preface

INTRODUCTION

The 21st century has witnessed a phenomenal increase in the number of virtual communities. This growth signifies our augmenting desire to connect, work, share, exchange, play and socialize with others irrespective of time, space, speed and distance. Today, more and more people are using social software such as Facebook, Twitter, MySpace, Blogs, Wikis, LinkedIn, and many others, to help them carry out their daily activities. As new technologies become an increasingly interwoven aspect of our everyday lives, it has become apparent that traditional methods for studying social systems that characterizes some of these technologies often lack the detailed understanding of aspects of human, social and cultural life that is required. Since virtual communities and phenomena inherent in them are emergent, there is still a lack of robust methods and approaches to study and understand virtual communities in breadth and depth. Clearly, this is critical if we are to provide complete and useful information systems, build better tools, and develop lean and efficient processes that can make interactions in these communities more productive, trustworthy, safe, secure and fun.

Currently, the massive utilization of virtual communities generates huge volume of data, which if systematically captured and appropriately analyzed, would be invaluable to increased understanding of social, educational and technological phenomena happening in these communities.

Further, the availability of tracking and analytic tools as well as the development of robust just-in-time data visualization software has helped enhance unprecedented opportunities to help researcher's answers questions they have entertained only theoretically for decades, largely due to the difficulty to directly observe social relations inherent in these communities.

This handbook of "Research on Methods and Techniques for Studying Virtual Communities: Phenomena and Paradigms" collectively appeal to a reorientation of research directions and methods and techniques on studying virtual communities. The book satisfies the need for diverse and yet coherent methodological consideration and tools for data collection, analysis and presentation on virtual communities.

Drawing from a wide variety of disciplines and sectors, methods covered in the book include; qualitative, quantitative, mixed methods, social network analysis, content analysis, program evaluation, discourse analysis, data mining, and data and user modelling. Metrics for measuring virtual communities are also discussed. Moreover case studies on important emergent phenomena in virtual communities are presented.

PURPOSE OF THE BOOK

Virtual communities have become a subject of considerable interest in both research and practice. These communities encompass a broad spectrum of activities, ranging from social networking, knowledge

networking, health and health care, educational and economical. Attempts to evaluate the performance of virtual communities would depend on various possible ways of defining and measuring "success" and depending upon the perspective of the researcher, the sector they are associated with, as well as the type of community being investigated. In the past, several researchers have used various methods and metrics to investigate and measure different phenomena in virtual communities. Some researchers employed rigorous research methods such as social network analysis; others used traditional qualitative or quantitative methods and data mining techniques, while others have relied on ad hoc methods. This is the first book that brings together a number of methods for examining virtual communities. The book describes various research methods relevant for virtual communities and provides the readers with ways in which to apply these methods. The methods and techniques presented in the book are mainly based on empirical research. Since currently there is no comprehensive book on research methods for studying virtual communities, this book is likely to have enormous impact on scholarly and practical profound knowledge on doing research on virtual communities. In addition, the book makes strong theoretical and practical contribution to the field.

TARGET AUDIENCE

This is a reference book, primarily intended for advanced undergraduate and graduate students and researchers interested in studying and building tools to support virtual communities. The book will be useful to programs taught in Computer Science, Educational Technology programs, Information Studies, Business and many other disciplines in the Humanities and the Social Sciences.

BENEFITS AND SCHOLARLY VALUE

This book is a practical and immediately useful reference for researchers, technologists, instructors and graduate as well as senior undergraduate students who want to better understand how to use scientific research methods to study virtual communities. Contributors also write about the nature of relevant tools for data collection and analysis. The major contributions of the book however, are the internationally and diverse chapters and the breadth and depth of the issues covered as well as the detailed discussions and presentations of various methods for studying virtual communities, illustrating with practical examples drawn from current research.

ORGANIZATION OF THE BOOK

The book has 44 chapters, which are spread across 5 sections. Section 1 of the book consists of chapters focused on an overview of virtual communities, and philosophical foundations of learning, teaching and engagement in virtual communities. Section 2 presents social and semantic network analysis of various aspects of virtual communities' as well as dynamic models of virtual communities. In Section 3, chapters deal with methods and methodology for studying virtual communities. Section 4 introduces chapters describing various measures and approaches for studying virtual communities. And Section 5 presents case studies on various technical and social aspects of phenomenon of virtual communities. An overview of each section of the book and chapters in it are described in the beginning of each section.