

Knowledge Transfer in Acquisition of a Small Hydrology Business

Sonia G. Lloyd

DISSERTATION.COM



Boca Raton

Knowledge Transfer in Acquisition of a Small Hydrology Business

Copyright © 2008 Sonia G. Lloyd

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the publisher.

Dissertation.com
Boca Raton, Florida
USA • 2008

ISBN-10: 1-59942-701-X
ISBN-13: 978-1-59942-701-0

KNOWLEDGE TRANSFER IN ACQUISITION OF A SMALL HYDROLOGY
BUSINESS

A Dissertation

Submitted to the
Faculty of Argosy University/Sarasota
in partial fulfillment of
the requirements for the degree of
Doctor of Business Administration

by

Sonia G. Lloyd

Argosy University

July, 2008

KNOWLEDGE TRANSFER IN ACQUISITION OF A SMALL HYDROLOGY
BUSINESS

Abstract of Dissertation

Submitted to the
Faculty of Argosy University/Campus

in partial fulfillment of
the requirements for the degree of
Doctor of Business Administration

by

Sonia G. Lloyd

Argosy University

July, 2008

Chair: Dr. Gordana Pesakovic

Committee: Dr. Pesi Amaria

Dr. Timothy Wiseman

Department: College of Business

Abstract

This study investigated the process of knowledge transfer during a company takeover. The target company is a small international company with offices in six countries that specializes in hydrology. The acquiring company is a large multinational with offices around the world. The acquirer has no experience in the hydrology business and this represents their first experience with the industry. A further factor in the study is looking at how the takeover is affected by differences in culture between the two businesses. The acquirer is very structured and the acquired highly informal.

Data for this study has been gathered from a questionnaire and interviews. The findings of the research were generally negative as there was little evidence of knowledge transfer taking place during the first seven months of the acquisition and a general failure to recognize the cultural differences. Furthermore the acquirer has initially allocated insufficient importance and resources to this acquisition.

TABLE OF CONTENTS

	Page
List of Tables	x
CHAPTER ONE: THE PROBLEM	1
Introduction.....	1
About Big Oilfield Corporation (“O”).....	3
About Small Hydrology Company (“H”)	4
Background of the Acquisition Process	4
Data Collection	6
Purpose of the Study	7
The Research Question	7
Problem Statement.....	8
The Research Questions.....	8
Limitations and Delimitations.....	8
Definition of Terms.....	10
Knowledge Terms	10
Merger Terms.....	11
Acquisition Terms.....	12
The anticipated significance of the study.....	13

The Overview of the Study.....	14
CHAPTER TWO: LITERATURE REVIEW.....	16
Introduction.....	16
Motivation behind acquisition	16
Acquirers systematic risk.....	16
Knowledge transfer in the organization.....	18
Human factors affecting knowledge transfers	18
Model of Organizational dynamics during the acquisition process.....	20
Human aspects and organizational fit.....	20
Early communication in acquisition	22
Challenges, emotion in acquisition, uncertainty, and cultural issues	22
Knowledge transfer in international acquisition.....	23
Factors facilitating the transfer	23
Internationalization and knowledge transfer.....	25
Patents, know how reputation, determinants of cross cultural knowledge, mental model measurement	25
Patents as indicators of knowledge transfer.....	29
Effects on cultural differences in acquisitions	29

Relationship between cultural distance and cross border acquisition	
performance	29
Post acquisition performance	35
EVA measurement technique	35
Measure and communicate the benefits of work-life policies more effectively	38
Measure by action research.....	38
CHAPTER THREE: METHODOLOGY	41
Introduction.....	41
Research Design.....	42
Population and sampling procedures	42
Access and Permission information.....	43
Data collection	43
Instrumentation	44
Procedures of the study.....	49
Data Analysis	51
CHAPTER FOUR: RESULTS	54
Restatement of the Purpose.....	54
Sample Description.....	55

Demographic Analysis.....	55
The Research Question Testing	57
Measurement of Transferring Knowledge	59
Interviews.....	59
Financial Reports	61
Second Questionnaire	61
Statistical Analysis: Communication Variable	62
Moral in the office	62
Job security issues.....	67
Value issues	71
Summary of Findings on Morale in the Office	76
Statistical Analysis: Strategy Variable.....	77
Strategy of the new management of acquirer “O” company	77
Training and access to the acquirer “O” system	81
Summary of Findings on Strategy	82
Statistical Analysis: Integration Process Variable	83
Integration in the “O” Team	83
Communication IT Support	90

Acquisition Fears	93
Summary of Findings on Integration	98
CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS ...	101
Summary	101
Review the Knowledge Transfer between offices in different countries.....	101
Findings in communication	102
Findings in strategy.....	103
The transition process during the acquisition of the small hydrology business by a large transnational corporation	103
Findings in the Integration Process.....	103
Conclusion	104
Comparing the findings of this study with the objectives of the “O” Company as set out in questions RQ1, RQ2 and RQ3	105
Future Research	107
List of References.....	109
Appendixes	112
<i>Appendix A: Questionnaire – Employees English version</i>	113
<i>Appendix B: Questionnaire – Employees Spanish version</i>	119

Appendix C: Directions by email, English and Spanish version125

Acknowledgements

I would like to express thanks to all those people whose support has helped me to complete this study.

I was fortunate to have an extraordinarily supportive committee, whom I offer my thanks.

I specially want to thank Dr. Gordana Pesakovic, the chairperson of my committee. At times when the dissertations process seemed to be getting beyond me, she always was there to provide support and patience no matter how difficult this may have been.

I would also like to thank Dr. Pesi Amaria who has helped to challenge me over those areas that at times I have found the most difficult. His support has helped me with the subjects I did not think I would ever understand. Special thanks to the intervention of Dr. Timothy Wiseman as my reader of my committee for his advice and support.

I also would like to thank my employers who have demonstrated continuing support and patience over the years of my studies. Completion of this study would not have been possible without the assistance of Julie Neff. I particularly want to thank Rick Keefer and Jerry Rowe for their friendship and encouragement without them I would not be where I am today.

Finally I would like to thank my husband David John Lloyd who has been my intellectual support and encouragement in helping me to finish my dissertation. My father Faustino Samaniego who has been a constant source of strength and motivation. I also would like to thank my brother and sisters: Francisco, Alicia, Elena and Patricia and especially the most important support in my life my mother Teresa Z. Rojas who is no longer present in this world, for her entire support and encouragement in enabling me to pursue and reach my goals.

LIST OF TABLES

Table	Page
1. Demographics information of “H” company.....	57
2. Morale in Office: Going to Work Q1a.....	62
3. Chi-Square Tests for Morale Survey Q1a.....	63
4. Morale in the Office: Working in the Office Q1b.....	64
5. Chi-Square Tests for Morale Survey Q1b.....	64
6. Morale in the Office: Leaving Work Q1c.....	65
7. Chi-Square Tests for Morale Survey Q1c.....	65
8. Morale in the Office: Assessment of Morale in the Office Q1d.....	66
9. Chi-Square Tests for Morale Survey Q1d.....	67
10. Job Security: Security in Current Position Q2a.....	67
11. Chi-Square Tests for Morale Survey Q2a.....	68
12. Job Security: Relative Feeling of Security Q2b.....	69
13. Chi-Square Tests for Morale Survey Q2b.....	70
14. Job Security: Measures for Greater Security Q2c.....	70
15. Value: Current Feelings of Value Q3a.....	72
16. Chi-Square Tests for Morale Survey Q3a.....	72

17. Value: Elements that Foster Feelings of Value Q3b.....	73
18. Value: Evaluation of Impact on the Organization Q6a.....	74
19. Chi-Square Tests for Morale Survey Q6a.....	74
20. Value: Assessment of Contribution to Company Q6b.....	75
21. Chi-Square Tests for Morale Survey Q6b	76
22. Strategy Variables: “O’s” Management and Reporting Structure Q4	78
23. Chi-Square Tests for Morale Survey Q4	79
24. Strategy Variables: Roles and Duties Q5a.....	80
25. Chi-Square Tests for Morale Survey Q5a.....	80
26. Strategy Variables: Reasons for Lack of Clarity Q5b	81
27. Training and Access: Training Opportunities Q7	82
28. Chi-Square Tests for Morale Survey Q7	82
29. Integration: Suggested Initiatives Q8.....	84
30. Integration: Awareness of “O’s” Organization and Plans Q9	85
31. Chi-Square Tests for Morale Survey Q9	85
32. Integration: Effectiveness of “O’s” Presentation Q10a	86
33. Chi-Square Tests for Q10a.....	87
34. Integration: Additional Information Needed from “O” Q10b	88

35. Integration: Contact with “O” Colleagues Q11a	89
36. Chi-Square Tests for Morale Survey Q11a.....	89
37. Integration: Opportunities to Share Knowledge with “O” Colleagues Q11b	90
38. Chi-Square Tests for Morale Survey Q11b	90
39. IT Support: Completion of Training Q12a	91
40. Chi-Square Tests for Morale Survey Q12a.....	91
41. IT Support: Value of Training Q12b	92
42. Chi-Square Tests for Morale Survey Q12b	92
43. Acquisition Fears: Principal Fears and Expectations Q13a.....	94
44. Acquisition Fears: Anticipated Change in Professional Life Q13b.....	95
45. Chi-Square Tests for Morale Survey Q13b	95
46. Acquisition Fears: Expected Changes to Professional Life Q13c+	96
47. Interview Measure Analysis	97

CHAPTER ONE: THE PROBLEM

Introduction

As competitive companies confront globalization while trying to maintain productivity and remain competitive when faced with emerging markets, they face daunting obstacles especially when trying to expand internationally (Sinha, Khanna, & Palepu, 2005). The new business model for this specific research is one of acquisition. The level of merger and acquisition activity and the ease with which deals can be completed matters because such transactions enable corporate revitalization and the threat of being taken over keeps managers on their toes (Japanese firms, 2007). Existing research findings on knowledge transfer in the acquisition process have offered different approaches compared with general performance during an active period of acquisition. Such findings point to the limitations of acquiring a company in order to obtain its superior management or operational expertise. Additionally, such acquisitions require multi-faceted approaches as individual business units strive to implement the details of integration. These approaches do not address the process of the knowledge transfer during the acquisition in detail; they are focused more on considering the acquisition as strategy rather than as a tool. Moreover most of the literature on acquisition is more concerned with growth at high speed, without a clear plan to capture additional growth once the target is integrated and synergies are captured. An acquisition can be a powerful builder of short term value but there is an inevitable decline if business units do not combine such value with a solid approach for the knowledge transfer in the acquisition process.

The purpose of this research project has been to investigate the process of knowledge transfer during the acquisition process. In this study the process took place in multiple locations around the world where different organizational and cultural situations exist. The study examined how businesses that conducted and managed according to different organizational methods could be integrated.

This study was qualitative in nature. Evidence was gathered through interviews, observations, and questionnaires of a broad cross section of personnel in each of the research sites. The data collection began after the acquisition took place. This research study also analyzed the acquisition process and examined how attitudes and perceptions changed during the integration process.

This research project was based in a small hydrology service multinational company that was being acquired by a transnational oilfield organization which had identified a good opportunity to add the hydrology specialization into their organization. Additional factors were the cross border cultural differences, differences in work practice, further planned international expansion into new markets as well as the basic uncertainty experienced by personnel of businesses undergoing acquisition by other entities. All these factors could have been obstacles to the process of knowledge transfer. The specific focus of this research study, the acquisition of Small Hydrology Company (H) by a Big Oilfield Corporation (O), presented an opportunity to develop additional scale and scope in the area of the impact of acquisition on businesses—which has been translated into a basic structural change in the business environment.

The primary purpose of this study was to observe the system for transferring knowledge between offices within a region or into a new region with particular emphasis

on how this occurred during the acquisition. The first objective of this study was to directly review the knowledge transfer between offices in different countries. The second objective concerned the transition process during the acquisition of the small hydrology business by a large transnational corporation.

To contextualize the acquisition process and adaptations reported in this research study, a brief overview and description of the companies, “O” Big Oilfield Corporation which is acquiring “H” Small Hydrology Company, is offered here.

About Big Oilfield Corporation (“O”)

“O” Corporation, a transnational company, is one of the world’s leading oilfield services providers supplying technology, information solutions, and integrated project management that optimize reservoir performance for customers working in the oil and gas industry. Founded in 1926, today the company employs more than 70,000 people of over 140 nationalities working in approximately 80 countries. The company comprises two business segments: Oilfield Services supplies and Solutions Services that support core industry operational processes. It was in the Solutions Services component of the company that “O” corporation wanted to add the additional services in hydrology consulting by acquiring “H” company.

“O” corporation’s commitment in geographical environments has always been maintained to the highest standard of quality, health, and safety especially for the protection of the environment in the communities in which “O” corporation operates. “O” corporation does not have a single nationality which establishes its culture, but it operates in a truly global fashion throughout the world. The diversity effort of “O” corporation is based on Publicity Trade Corporation concerned with profitability and share holder

return. Within its internal operations, meritocracy drives actions, decisions, and employee advancement, and “O” corporation claims a competitive advantage in communication because of the multitude of languages represented by its multi-national operation. English is the common language of “O” corporation internal management communication.

About Small Hydrology Company (“H”)

“H” company, a multinational group specializing in the development, management, and environmental protection of water resources with offices on four continents, provides services to mining companies, water utilities, international donors, private companies, and governments. It has completed projects in over 45 countries, and has the potential for offering its services worldwide.

“H” company provides technical services in a wide range of disciplines, including hydrogeology, hydrology, geochemistry, geology, geophysics, numerical modeling, environmental science, water resources planning, water engineering, GIS, and database management. “H” Company was formed in 1989, with the first office located in Shrewsbury, UK. Offices were subsequently opened in the United States, Chile, Australia, Canada, and Peru, expanding into new areas to provide services mainly to mining and government clients. The growth and success is the result of the ability to hire top level personnel and provide exceptional quality to clients. “H” is an employee-owned group able to offer clients independent and impartial technical advice, free from conflicts of interest.

Background of the Acquisition Process

The research presented in this study focused on the adaptations and changes made by “H”, a hydrology company, during the acquisition process. Since 2002, “H”’s growth

has been constant and well-recognized and appreciated by its clients. “H” company is a privately owned company where the shareholders are all employees of the company. Share ownership is wide but control is maintained by the original founders, and they are the driving force behind the integration into a larger company. The founders identified the following two means as alternative exit strategies:

- a) Company founders have looked for options for selling their shares. The sale of their shares to junior staff was unlikely as they lacked financial resources and capability to manage “H” company in the right direction. Sale to another company was therefore a better option.
- b) Another possibility was looking for a partnership with other hydrology-related services firms that could help to expand the services of “H” company with the aim of eventually selling the business to this new partner.

“O” corporation, whose primary business is oilfield service, faced the problem that the oil industry is recognized to have reached a peak. “O” corporation therefore sought alternative sources of business. As part of its activities, “O” corporation had close dealings with hydrology businesses and identified this area as having potential. “O” corporation considered additional services in hydrology services to be able to provide a whole package service to mining, petroleum, and government clients. “O” corporation also speculated that as bio fuels gradually replaced natural oil, sources of water would become more important to its clients.

The integration approach was complicated by the different organizational structures of “O” and “H” company. “O” as an international transnational company had a well structured organization. The company originated in electronic engineering and its

business structure was quite formal with the support of different managers of a high level of professional background in finance and legal matters.

“H,” a multinational company, was established by technical managers who did not possess any particular managerial, financial, or legal training. The vast majority of senior employees were hired for technical ability, and these employees were put in charge of the various branches. Thus, because the managerial aspects of the company were handled by employees whose expertise was technical rather than managerial, the operations of the company were characterized by a very informal management style. Furthermore, anecdotal and historical evidence suggested that the senior hydrology staffs who manage the head office tended to stick to what they knew and could be dismissive towards people with professional backgrounds different from their own and toward female technical staff.

Data Collection

To quantify how “H” company adapted to its acquisition by “O” corporation, data was collected through a variety of interview techniques:

- Focus groups (regular, mini and super groups)
- One-on-one Interviews (among regional managers, operation managers, office staff, technical staff)
- Trade (specialty interviews in person or by phone)
- Ethnography interviews (in-home/on location interviews)
- Surveys of all staff
- Financial reports for FY 2006 and FY 2007 that were analyzed to quantify how the takeover impacted business performance

Data collection began after the acquisition took place; analysis of this data yielded quantitative and qualitative data on the impact of the acquisition including information on how attitudes and perceptions changed during the integration process.

Purpose of the Study

The research study described here assessed the approach to integration used in “O’s” acquisition of “H” company with special attention to the changes necessary as an informal business structure adapted to a formal business structure. The primary purpose of this study was to improve the system for transferring knowledge between offices within a region or into a new region with particular emphasis on how this occurred during an acquisition. A significant component of this research was to identify ways of improving the knowledge transfer and adjustment process as the acquisition was carried out. Rather than just examining the acquisition process, this study focused on how the individuals engaged and involved in the process of transition and interacted with each other. An additional component of this study was to highlight the efficacy of action research in the acquired organization; the research enabled employees to understand and adjust to the change during the acquisition process

The Research Question

This research was based in a small hydrology service multinational company – Small Hydrology Company (“H”), whose main office is in the United Kingdom. In October 2007, the company began going through acquisition by Big Oilfield Corporation (“O”), which provided an important opportunity to study the transfer of knowledge during acquisition.

The Sales Agreement was signed between the two companies in early 2008. The transition process was studied as acquisition and integration processes continued through 2008.

Problem Statement

1. - How is the process of integration executed between a small company acquired by a large company where one uses informal procedures and the other has a formalized approach?
2. How can the process of acquisition and integration proceed at the same time?

From those two problem statement we generated the following research questions:

The Research Questions

Part 1: Communication between acquirer "O" and acquired "H"

RQ1: Is the communication effective and successful between "O" and "H" in relation to knowledge transfer during acquisition?

Part 2: Strategy to encourage knowledge transfer from "H" to "O" company

RQ2: Does the strategy encourage knowledge transfer and lead to a positive value creation during the post acquisition integration?

Part 3: Integration Process

RQ3: Is the integration both effective and positive and has it improved the employee situations?

The limitations and delimitations of the study

The limitations were based on assumptions about the acquisition process which anticipated conditions such as the following:

The success of the research was dependent upon the knowledge transfer process being completed with some degree of success. If the process failed or was blocked then the research would be limited to showing how things could go wrong. Or if the acquisition went through a hostile takeover by value-hungry predators then research would be limited because of a vulnerable management.

As the employees were the participants for the interviews, they might not have provided serious answers to the interviews if they were not encouraged to take the interviews seriously enough. They might also have been afraid of being fired and not wanting to upset their existing or new bosses and therefore might not have given honest answers. Confidentiality was achieved through the use of anonymous questionnaires.

A further limitation for the research involved assumptions about the degree of eagerness “H” employees demonstrated over integrating “O” culture, attitude, formal structure of the company, and personality. Resistance to change could have produced unduly negative results or posed deliberate obstacles.

An additional potential delimitation on the research was the sample size which could have been located in different countries. Many of the employees were on the mine site for weeks and only back to the office when they finished the project. Because of the hydrology service atmosphere and personality, employees might not have viewed the interview as a priority. It was important that the interviews have the full support of the presidency of the corporation in order to obtain everybody’s cooperation.

For “H” company employees, this research process provided them, for the first time, an opportunity to express their views. The “O” corporation, a transnational