

# The power of online opinion leaders in negative e-WOM dissemination

By

Rong Mei Zhang

A thesis submitted to  
Auckland University of Technology  
in partial fulfilment for the degree of  
Master of Business (MBUS)

2015

Marketing, Advertising, Retailing and Sales Department

Primary Supervisor: Dr Crystal Yap

Secondary Supervisor: Dr Yingzi Xu

## **Abstract**

Consumers nowadays are able to exchange information and opinions without physical distance constraint through various online social media channels. These online social media channels facilitate negative electronic word-of-mouth (e-WOM) spread over the world much faster than before. Negative e-WOM communication among consumers can damage a brand and may cause a serious crisis for the company. Thus, companies need to closely monitor negative e-WOM communication in social media, in order to identify the problems, to predict the potential negative impact on the business, and to make a strategic decision on how to respond negative consumer opinions. However, the majority of online discussion communities are self-organised, consumers have much more freedom and control than in company-organised discussion channels to exchange information and opinions. The negative e-WOM communication in these online communities are perceived as being more trustworthy, and more likely to be adopted by a large number of consumers. Although marketers have noticed the impact of negative e-WOM on business, it has been a significant challenge to get control of negative e-WOM dissemination in these communities.

Researchers have identified an influential force – online opinion leaders- who reside in these online consumers communities. These opinion leaders are recognized as the most important and influential figures affecting online consumers' negative e-WOM adoption. Companies might be able to intervene negative e-WOM dissemination by influencing opinion leaders' behaviour within these communities. However, the online opinion leader emergence and leadership process in these online communities are not well studied. It is not clear what mechanism underlies the influences of opinion leaders on negative e-WOM adoption in these online communities.

This study attempts to explore the dynamics of online opinion leadership establishment in negative e-WOM spreading development. Particularly, the research intends to investigate:

(1) How does online opinion leadership emerge in an online community following negative WOM?

(2) What types of online opinion leadership emerge based on the interactions and consumer sentiments within an online community?

(3) How does the role of an online opinion leader evolve over the course of negative e-WOM dissemination? And

(4) What are the theoretical and managerial implications for consumer researchers and practitioners in understanding the emergence and evolution of online opinion leadership within a negative e-WOM context?

This study has employed a qualitative research method to answer the above research questions. A thematic analysis approach was applied to analyse 1,911 online discussion posts. These posts retrieved from *MacRumors* online discussion forum are around the issue of the faulty of the new iPhone 6 in September 2014. The activities of opinion leaders and their roles in the online community were analysed in four different discussion phases based on the negative e-WOM development.

The main contribution of this research is three-fold. First, the results illustrate a leadership role taking sequence tabulation to portray how online opinion leaders accordingly gain leading position as the discussion volume changes. Second, the finding extends theoretical understanding of the dynamic of opinion leader's activities and their roles in a negative e-WOM context which has been missing in the past research. More specifically, the findings identified eight important roles for the establishment of opinion leadership in negative e-WOM development. Among these eight roles, the following were

identified as crucial in an opinion leader successfully gaining control of the spread of negative e-WOM, and eventually eliminating it: community member, helper, opinion presenter, opinion defender, evidence provider, evidence analyst, reporter and brand guardian. Lastly, it also provides practical suggestions for companies to repair the damage of negative e-WOM in online communities and regain their consumers' trust by utilizing the power of online opinion leader.

## Contents

ABSTRACT .....	I
LIST OF FIGURES.....	VI
LIST OF TABLES.....	VII
ATTESTATION OF AUTHORSHIP.....	VIII
ACKNOWLEDGEMENTS.....	IX
CHAPTER ONE: RESEARCH INTRODUCTION .....	10
1.1 INTRODUCTION: .....	10
1.2 RESEARCH BACKGROUND AND CONTEXT .....	10
1.3 STATEMENT OF THE PROBLEM .....	11
1.3 RESEARCH OBJECTIVES .....	13
1.4 SIGNIFICANCE OF THE STUDY .....	14
1.5 ORGANISATION OF THE THESIS .....	15
CHAPTER TWO: LITERATURE REVIEW .....	16
2.1 INTRODUCTION.....	16
2.2 ONLINE COMMUNITY .....	16
2.2.1 Self-organised community .....	18
2.2.2 Brand community .....	20
2.2.3 Online forums.....	21
2.3 E-WOM.....	23
2.3.1 E-WOM.....	23
2.3.2 E-WOM impact.....	25
2.3.3 E-WOM credibility .....	29
2.4 OPINION LEADERS AND E-WOM .....	31
2.4.1 The characteristics of opinion leaders .....	31
2.4.3 Opinion leader's credibility.....	32
2.4.2 Online opinion leaders and innovation diffusion .....	33
2.4.4 Opinion leadership and discussion activities .....	35
2.5 RESEARCH GAP.....	36
2.6 ROLE THEORY.....	37
2.6.1 The basic ideas of Role Theory and its relevance to current research .....	38
2.7 ABOUT THIS RESEARCH.....	39
2.8 SUMMARY .....	40
CHAPTER THREE: METHODOLOGY .....	41
3.1 INTRODUCTION.....	41
3.2 RATIONALE FOR QUALITATIVE RESEARCH DESIGN .....	41
3.3 OVERVIEW OF RESEARCH DESIGN .....	42
3.4 DATA COLLECTION METHOD .....	42
3.4.1 Criteria for choosing data source .....	43
3.5 DATA ANALYSIS METHOD.....	46
3.5.1 Identifying online opinion leaders .....	46
3.5.2 Centrality of online users .....	46
3.5.3 Text mining and social network analyses.....	47
3.5.4 Social network analysis and attribution analysis .....	48
3.5.5 Attribute Matrix.....	49
3.6 THEMATIC ANALYSIS .....	54
3.6.1 Explanation of thematic analysis procedures .....	55
3.7 SUMMARY .....	55
CHAPTER FOUR: DATA ANALYSIS AND FINDINGS.....	57
4.1 INTRODUCTION.....	57
4.2 RESULTS OF IDENTIFYING OPINION LEADERS .....	57

4.3	THE FLUCTUATION OF ONLINE DISCUSSION VOLUME .....	61
4.4	THE CHANGES OF THE NUMBER OF SUPPORTERS FOR TWO OPINIONS.....	65
4.5	THEMATIC ANALYSIS RESULTS .....	66
4.5.1	The analysis strategies .....	66
4.5.2	The online opinion leader's roles .....	69
4.5.3	The opinion leader's activities and the role evolution.....	72
4.6	ANSWERING RESEARCH QUESTIONS .....	84
4.6.1	RQ1: The emergence of opinion leadership.....	84
4.6.2	RQ2: Different types of opinion leadership roles .....	88
4.6.3	RQ3: Opinion leader role evolution .....	90
4.7	SUMMARY .....	92
<b>CHAPTER FIVE: DISCUSSION AND IMPLICATIONS .....</b>		<b>94</b>
5.1	INTRODUCTION.....	94
5.2	THE CONVERGENCE AND DIVERGENCE OF CURRENT STUDY FINDINGS.....	94
5.2.1	The power of online opinion leader in the e-WOM dissemination .....	94
5.2.2	Online opinion leader's characteristics.....	94
5.2.3	Online opinion leader's roles in negative e-WOM dissemination.....	95
5.3	RQ4: RESEARCH CONTRIBUTIONS AND IMPLICATIONS.....	96
5.3.1	Theoretical implications .....	97
5.3.2	Practical implications .....	98
5.4	SUMMARY .....	99
<b>CHAPTER SIX: CONCLUSIONS .....</b>		<b>100</b>
6.1	INTRODUCTION.....	100
6.2	MAIN CONCLUSION.....	100
6.3	LIMITATIONS.....	101
6.4	FUTURE RESEARCH DIRECTIONS.....	102
6.5	SUMMARY .....	103
<b>REFERENCES .....</b>		<b>105</b>
<b>APPENDICES: .....</b>		<b>113</b>
APPENDIX 1- THEMATIC MAP PHASE ONE .....		113
APPENDIX 2- THEMATIC MAP PHASE TWO .....		113
APPENDIX 3- THEMATIC MAP PHASE THREE .....		114
APPENDIX 4- THEMATIC MAP PHASE FOUR .....		115

## List of Figures

<b>FIGURE 1. THE RELATIONSHIP MAP OF 10 MAIN DISCUSSION CONTRIBUTORS OF IPHONE BENDING THREAD .....</b>	<b>61</b>
<b>FIGURE 2. IPHONE 6 BENDING DISCUSSION VOLUME CHANGES TREND .....</b>	<b>63</b>
<b>FIGURE 3. IPHONE BENDING DISCUSSION’S FOUR PHASES .....</b>	<b>65</b>
<b>FIGURE 4. THE NUMBER OF SUPPORTERS FOR TWO OPINIONS .....</b>	<b>66</b>
<b>FIGURE 5. AN EXAMPLE OF THE INITIAL CODING FRAMEWORK .....</b>	<b>68</b>
<b>FIGURE 6. AN EXAMPLE OF THE INITIAL CODING .....</b>	<b>68</b>
<b>FIGURE 7. AN EXAMPLE OF THE FINAL CODING FRAMEWORK.....</b>	<b>69</b>

## **List of Tables**

<b>TABLE 1. THE ATTRIBUTE MATRIX VARIABLES' CALCULATION AND MEANING.....</b>	<b>53</b>
<b>TABLE 2. ONLINE OPINION LEADER ATTRIBUTE MATRIX MEASUREMENT.....</b>	<b>54</b>
<b>TABLE 3. TOP 10 IMPORTANT PEOPLE IN IPHONE BENDING THREAD.....</b>	<b>60</b>
<b>TABLE 4. OPINION LEADER'S ACTIVITIES AND ROLES PLAYED IN THE IPHONE BENDING NEGATIVE E- WOM SPREADING PHASES.....</b>	<b>72</b>



## **Attestation of Authorship**

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Signature:

A handwritten signature in black ink, appearing to be 'Rong' with a stylized flourish at the end.

Date: 30 July 2015

## **Acknowledgements**

I would like to take this opportunity to express my sincere thanks to our MARS Department for their support of me, to make this thesis possible. Thanks to all the faculty members for their help and support.

I must thank my two supervisors, Dr. Crystal Yap and Dr. Yingzi Xu, who have supported and encouraged me throughout the thesis with their knowledge and patience, whilst allowing me to work in my own way. I have a deep sense of gratitude for their excellent guidance, and for providing me with support to develop my thesis idea. This thesis would not have come to completion without their continuous feedback, encouragement and belief in my work.

Finally, a special and grateful thanks to my family for their support, great care, continuous encouragement and love.

# **Chapter One: Research Introduction**

## **1.1 Introduction:**

This study aims to explore the phenomenon of how marketers influence negative electronic word of mouth (e-WOM) dissemination through influencing opinion leader behaviour in self-organised online discussion communities. The purpose of this study is to explore a negative e-WOM discussion thread in an online discussion forum to discover how the opinion leaders establish their leadership status, and the influence they have on the spread of negative e-WOM. This research employed a qualitative methodology to illustrate the phenomenon under examination. This chapter begins with the research background and context, followed by the problem statement and research questions. The chapter concludes with a discussion of the significance of the study.

## **1.2 Research background and context**

E-WOM is defined as “any positive or negative statement made by potential, actual or former customers about a product or company which is made available to a multitude of people and institutions via the Internet” (Hennig-Thurau, Gwinner, Walsh & Gremler, 2004, p.39). This definition emphasises the importance of the development of internet technologies and numerous electronic media in enabling e-WOM communication to reach much wider potential audiences (Hennig-Thurau, Gwinner, Walsh & Gremler, 2004; Stauss, 1997). The internet enables consumers to actively seek, share and communicate e-WOM through electronic means from anywhere in the world, rather than relying only on the recommendations of family or friends (Liang, Ekinici, Occhiocupo & Whyatt, 2013). As e-WOM is derived from unknown individuals’ personal experiences and their voluntary discussion contributions, it is perceived as a

more unbiased, trustworthy and reliable resource for decision making. Therefore, e-WOM is claimed to be “the world’s most effective” and most powerful marketing force (Minster, 1999).

However, e-WOM communications present big challenges to marketers because negative e-WOM is more easily adopted and spread by consumers than positive e-WOM (Füller, Mühlbacher, Matzler & Jawecki, 2009). Wide negative e-WOM ripple effects can have an immediate negative impact on sales volumes, can damage the brand image and company reputation, and cause a business crisis. Competitors can capitalise on the negative consumer discourse to gain a competitive advantage, which can intensify the negative impact on product, brand and business. As a result, marketers have to deal carefully with the spreading of negative e-WOM, and pay great attention to any negative conversation between customers about their product, service and even about the company behaviours (Stauss, 1997).

### **1.3 Statement of the problem**

Scholars have addressed the issues relating to negative e-WOM in a number of research directions. One stream of research focused on negative e-WOM which is embedded in a variety of discussion interaction environments. The research found that consumers in self-organised online communities have strategic freedom to truly express and share their personal opinions, emotions and experiences (Kaiser & Bodendorf, 2012; Armstrong & Hagel 1996; Faraj & Johnson, 2011; Dellarocas, 2006). The negative e-WOM conversations derived from these personal experiences are perceived as more reliable and trustworthy, taking a significant role in consumer opinion formation (Brown, Broderick & Lee, 2007). Therefore, these negative e-WOM communications from self-organised communities such as discussion forums and brand communities which are more related to business, brand and product have significant negative impacts on product sales,

brand reputation, brand image, business profit and stakeholders' benefit (Noone, 2012; Kaiser & Bodendorf, 2012). Unfortunately, as these communities are organised by consumers themselves, marketers have a lack of control over the discussion topics, and have a limit of immediate reach to the negative e-WOM exchange behaviour within the online consumer community.

The other stream of research concerns e-WOM adoption behaviour in the online communities. The discussion focuses on how e-WOM has become one of the most important information sources for online consumers when estimating product value (Lee & Lee, 2009). When consumers encounter the availability of both negative and positive e-WOM, they need to evaluate the trustworthiness of both sides of the discussion. Thus, e-WOM information credibility becomes a significant determinant in e-WOM adoption behaviour (Cheung, Luo, Choon & Chen, 2009). This line of research emphasises the importance of e-WOM credibility in consumer adoption behaviour and the decision making process.

The third research stream concerns opinion leaders' influence in the dissemination of negative e-WOM. There is sufficient evidence to show that the e-WOM conversation from opinion leaders has a higher credibility than other individual consumers, and their opinions tend to be more likely to be accepted; therefore, their opinions have a significant influence on negative e-WOM adoption and dissemination (Riegner, 2007; Shoham & Ruvio, 2008; Godes & Mayzlin, 2009; Gupta & Harris, 2010). The power of an opinion leader resides in that opinion leader's credibility, and this credibility is influenced by the leader's social position which is built up through the length of time of interactions with other online users (Godes & Mayzlin, 2009). This line of research emphasises opinion leaders' strong influence on the spreading of negative e-WOM, and identifies online

opinion leaders as a unique force derived from online consumers. They have the ability to influence the spread of negative e-WOM in self-organised discussion communities through leadership establishment and communication with other online consumers.

These three streams of research indicated that negative e-WOM in self-organised online communities is difficult for marketers to have control over. Opinion leaders, as a special type of consumer, are identified as being able to influence other consumers in negative e-WOM adoption within self-organised online communities through leadership establishment during an ongoing e-WOM communication. It seems that the opinion leader is a force that can potentially be influenced to help marketers gain control of negative e-WOM dissemination in self-organised online communities. While these areas of inquiry are all important, some key issues remain unanswered. For example, how do opinion leaders gradually build their credibility and gain a leadership role during a negative e-WOM discussion? What do they actually do to influence the ongoing process of negative e-WOM dissemination through the leadership establishment process?

An understanding of the dynamics of leadership establishment in the spread of negative e-WOM within a self-organised online community is worthy of exploration. Based on this understanding, marketers may design intervention strategies in stimulating opinion leadership and leveraging e-WOM dissemination in order to protect businesses from any negative impact.

### **1.3 Research objectives**

This study will focus on discovering the dynamic process of online opinion leadership establishment in a negative e-WOM discussion context. The objective of this study is to explore the emergence and evolution of opinion leadership in an online community. In particular, this study addresses the following research questions:

1. How does opinion leadership emerge in an online community following the spread of negative e-WOM?
2. What types of opinion leadership roles emerge based on the interactions and consumer sentiments within an online community?
3. How do the roles of opinion leaders evolve over the course of a negative e-WOM dissemination?
4. What are the theoretical and managerial implications for consumer researchers and practitioners in understanding the emergence and evolution of opinion leadership within a negative e-WOM context?

#### **1.4 Significance of the study**

This study intends to integrate the concepts from the thoughts of a self-organised online community, opinion leadership, and e-WOM dissemination in order to explore the emergence and evolution of online opinion leadership and its impact on negative e-WOM dissemination. The theoretical insights developed in this study are expected to provide a deeper understanding of the leadership role-taking and evolution process, and to provide the initial foundation toward a solid conceptual framework needed to guide future research in this domain.

In addition, as the study is particularly aimed towards the discovery of the minutiae of opinion leadership establishment and role-taking evolution, it is expected to open the door to a new stream of research around the dynamic process of e-WOM spread. The findings of the research can be applied in the studies of other online discussion platforms, and may open further research avenues in the topic.

Moreover, this study aims to reveal the dynamics of opinion leadership establishment process. The results are expected to provide a detailed exploration of opinion leader activities, and role-taking behaviour in the dissemination of negative e-

WOM. It is also anticipated that the findings will help marketers to identify the most effective time to intervene in the negative e-WOM dissemination process in order to effectively minimise the negative effects of e-WOM. Therefore, the suggestions from this study are expected to provide strategies for marketers to gain some control over the spread of negative e-WOM in self-organised online communities, and protect the business from negative e-WOM impacts.

Lastly, past studies on opinion leadership and e-WOM have been dominated by a quantitative methodological approach. As a qualitative exploratory study, the findings from this study are expected to provide a more meaningful and in-depth explanation around the establishment of online opinion leadership in the negative e-WOM dissemination process.

## **1.5 Organisation of the thesis**

This thesis contains six chapters. Chapter One provides an introduction to the research by identifying the research gap in the current literature, and outlines the research objectives. Chapter Two reviews the existing literature with a specific focus on online discussion communities, e-WOM interaction, and opinion leadership establishment. A discussion of the theoretical foundation for the current study follows. Chapter Three develops a description of the research design and methodology, including data collection and data analysis techniques. Chapter Four outlines the details of the data analyses and the results of the thematic analysis, which answer the research questions. Chapter Five follows with a discussion of the study and its implication. The final chapter completes this research, addresses limitations and proposes suggestions for future study.



## **Chapter Two: Literature Review**

### **2.1 Introduction**

This chapter explores the literature relevant to this study. First of all, this review of literature will explore the e-WOM spreading environment (online communities) to familiarise the reader with the online communication environment. The second section of this literature review will aim to compare positive and negative e-WOM, and the different impacts each has on business. The final section of this chapter will focus on a discussion of the influential power of the opinion leader in the e-WOM spreading process. These three sections of the literature review aim to reveal the major discussion points and findings for negative e-WOM and its spreading process from past research, as well as serving to indicate a research gap for this current study.

### **2.2 Online community**

Online community is the virtual platform where registered members communicate with each other to share experiences and opinions (Balasubramanian & Mahajan, 2001). Early discussion of the virtual community started from an electronic information exchange system in 1976 (Armstrong & Hagel 1996; Balasubramanian & Mahajan, 2001). The initial use of a virtual community was computerised conferences between scientists and engineers to participate in a discussion of relevant questions (Armstrong & Hagel 1996; Balasubramanian & Mahajan, 2001). In recent times, the number of computer users has dramatically increased, and online users have begun to explore internet commercial messages (Armstrong & Hagel, 1996; Matthew & John, 2009). Individual online users can have access to other network users, and can participate in a discussion on particular topics or activities within an online community group (Wellman, 2001; Alexandrov, Lilly & Babakus, 2013). A large number of online consumers have

communicated or exchanged information and opinions related to businesses and products (Armstrong & Hagel, 1996; Me, 2003). The phenomenon of participation in an online community and the behaviour of information interaction has led to the formation of marketing values of online communities (Kalyananm & McIntyre, 2002).

Past research reported that online communities enable individual behaviours that would be different in traditional organisations (Dahlander & Frederiksen, 2012; Bagozzi & Dholakia, 2002; Ren, et al. 2012; Brown, Broderic & Lee, 2007). First, online communities enable individuals with common interests or experiences to communicate by breaking through place and time limitations (Brown, Broderic & Lee, 2007; Ren, et al., 2012). Secondly, as online community members are anonymous, they have a strategic freedom to exchange e-WOM information (Kaiser & Bodendorf, 2012). Thirdly, communities are built on voluntary participation, and there is no central authority within the community as opposed to in traditional communities. Lastly, online communities are normally fluid structured due to the shifting membership (Johnson, Safadi & Faraj, 2015). The community structure is dependent on the active communication between online members. Thus, the social structure the within online community is constituted by the online member's interaction (Johnson, Safadi & Faraj, 2015).

Online communities can resemble reference groups such as friends and family members, as well as colleagues and co-workers (Bagozzi & Dholakia, 2002; Abrantes, Seabra, Large & Jayawardhena, 2013). This characteristic of online communities enables online users to consider these communities as “places” for contact with people with their “new faces”. Therefore, these online communities offer many opportunities for building and developing friendships, and for nurturing close relationships based on shared interests, values and beliefs (Balasubramanian & Mahajan, 2001). More importantly, these communities engage online consumers to convey their true feelings and opinions

about community topics (Verona, Pandelli & Sawhney, 2006; Stewart, 2010). Thus, one of the most important values derived from online communities for businesses is e-WOM creation and exchange behaviour (Cheng, Lam & Hsu, 2006). Marketers must pay close attention to the e-WOM messages and their influences on consumers.

### **2.2.1 Self-organised community**

In the context of online communities, some are company-organised. This is when business operators establish their own online communities with the aim of connecting with their customers, employees and other relevant stakeholders (Dahlander & Frederiksen, 2012). These company-organised communities provide new channels for organisations to release new product promotions, answer end-user questions, and share business news with customers, employees and business partners (Dellarocas, 2006; Ren, Harper, Drenner, Terveen, Kiesler, Riedl, & Kraut, 2012). In these communities, the company normally holds a strong control position of the availability of business information and consumer discussion topics (Bronner & Hoog, 2010). For example, Microsoft has its own online community that enables consumers to ask questions, find answers for relevant products, and share any idea about the use of their products. However, only community-approved wiki articles are available to all online consumers, and the discussion topics are strictly regulated within specific product categories. Although company-organised communities are easy to manage from the perspective of the marketer, consumer discussion participation rates are normally low because consumers understand that the company has potentially filtered and eliminated some negative information and discussion content from the consumer discussion.

On the other hand, large-scale online communities are usually self-organised. These communities enable online members to have greater freedom of discussion. Online consumers can discuss any topic relevant to the business news, product information and

personal usage (Dennis, Merriess, Jayawardhena & Wright, 2009). This strategic freedom enables online consumers to express more ideas, emotions and opinions about business (Kaiser & Bodendorf, 2012). Therefore, online consumers are more likely to participate in these communities to share e-WOM, and interact with each other. Furthermore, self-organised communities offer users a virtual platform to socially engage and exchange information with other anonymous strangers (Dahlander & Frederiksen, 2012). Therefore, the information from these communities is perceived to be much more reliable and trustworthy than company-organised communities. Further, online members can engage in multiple communities to integrate information about the discussion topics to form e-WOM (Dahlander & Frederiksen, 2012). Thus, the discussion of certain topics may contain many sources referred to by discussion participants. Moreover, as the discussion content is available for community members to review and criticise, the discussion and interaction between members creates collective expertise on the main topics and creates knowledge capital and value for all discussion contributors and other online consumers (Gruen, Osmonbekov & Czaplewski, 2006; Chen & Xie, 2008). Therefore, the information and discussion contents are perceived as more reliable and more trustworthy for online consumers. As a result, the information from these communities is considered to have a greater potential impact on e-WOM credibility and online consumers' e-WOM adoption behaviour (Hadey, 2011; Dennis et al., 2009, Dahlander & Frederiksen, 2012). Thus, it is important to study these self-organised online communities and online consumer behaviour within the community in order to fully understand the e-WOM adoption process.

In addition, self-organised online communities are normally fluid structured due to the shifting membership (Johnson, Safadi & Faraj, 2015). The community structure is dependent on the communication between online members. In these online communities, members normally exchange information in the text-based communication (Bagozzi &

Dholakia, 2002). They actively participate in online discussion through creatively written content, and their participant activities are reflected in the discussion content. The meaning of a discussion reflects online consumer opinions towards a topic, as well as the relationship of the participants with other members of the community. Therefore, in each post, how information is exchanged and how the discussion message is delivered can influence individual member relationships with others and their status within the community (Bagozzi & Dholakia, 2002). Thus, the social structure within online community is constituted by the interaction between online community members (Johnson, Safadi & Faraj, 2015).

The above discussion shows that prior research into online communities primarily emphasises differences between online communities and traditional offline communities. It is known that online community members exchange information and opinions about businesses and products within the community. However, the dynamic process of how consumers experience participation in online communities has been largely ignored. Although there is growing evidence that online interaction around e-WOM provides sources of information for online consumers and that it has the ability to shape the community members' opinions and consumption decisions, there is still a lack of research on how e-WOM interactions influence the trust of a member towards a specific individual's opinion, and how e-WOM influences consumers' attitudes towards the business in these communities.

### **2.2.2 Brand community**

Among self-organised online communities, there is a subset of online communities that are brand related and which are called brand communities (Hickman & Ward, 2013).

The online members in brand communities normally follow a single brand and its products. These consumers usually have special interests in the brand and brand-related events or news. They understand the fundamental difference between members and non-members, and create a strong social bond between members towards the brand (McWilliams, 2000; Hudson, Roth, Madden & Hudson, 2015). Although some of the members are brand fans and supporters, they have a strong sense of moral responsibility to the brand and to information browsers (Hickman & Ward, 2013). This special facet of brand communities motivates members to engage in online discussion activities. From a marketing perspective, the in-depth discussion from these online communities is highly relevant to brand reputation and brand image (Hudson et al., 2015). The exchanged information, specifically e-WOM content among the discussion participants, is extremely important in determining brand identity, and in creating brand relationships with online consumers (Bagozzi & Dholakia, 2002). Marketers need to monitor the discussion topics and contents throughout the discussion development in order to understand the progress of e-WOM spread with the intention of more accurately predicting the potential influence on the brand.

### **2.2.3 Online forums**

Online discussion forums have been recognised as one of the most popular online community channels (Cheung, Lee & Rabjohn, 2008; Zhang, Craciun & Shin, 2010, Cheung, Lou, Choon & Chen, 2009; Wasko, Teigland & Faraj, 2009) as they can engage a huge number of online consumers to participate in a discussion. Similar to other self-organised online communities, the members of online discussion forums share the same interests and practices, and have similar experiences with using the same products. (Dellarocas, 2006; Armstrong & Hagel, 1996). The e-WOM from online forum discussions has been identified as one of the major sources of mainstream information

available for online consumers to review, browse and discuss when they encounter questions related to products or services. Research suggests that online discussion forums have become an important and open opinion platform, as they have taken a significant role in the shaping of opinion (Dellarocas, 2003; Dellarocas, 2006; Kankanhalli, Tan & Kwok-Kee, 2005).

Similar to other discussion communities, members have a special bond with the brand; they can share knowledge, search for solutions to problems, learn through posting and responding to other members' questions on the product, tell stories of personal experiences and discuss product-related issues (Wasko, Teigland & Faraj, 2009). At the same time, individuals can gain access to new knowledge, ideas, opinions, information, expertise and product-relevant news (Cheung, Lee & Rabjohn, 2008; Zhang, Craciun & Shin, 2010, Cheung, Lou, Choon & Chen, 2009). The interaction between online members is more active, intensive and faster than in other online communities (Cheung, Lee & Rabjohn, 2008). The interaction between members contains a larger volume of e-WOM from personal experience (Wasko, Teigland & Faraj, 2009). Thus, the spread of e-WOM is more active, intensive and faster than in other online communities.

## **2.3 E-WOM**

The topic of e-WOM has been well studied in the past research. This section will review the relevant literature with an aim to compare positive and negative e-WOM, and the different impacts each has on business to discuss the influence of e-WOM credibility on online consumer e-WOM adoption behaviour.

### **2.3.1 E-WOM**

E-WOM is defined as ‘any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the internet’ (Hennig-Thurau al. 2004, p. 39). The concept of e-WOM is derived from traditional WOM (Hardey, 2011), but has unique features (Lee & Youn, 2009). For example, traditional WOM is more likely to be restricted to immediate family and friends, whilst e-WOM largely occurs between strangers or online users who do not have a strong social tie with one another (Dellarocas, 2003; Lee & Youn, 2009). Therefore, consumers can seek advice from anywhere rather than relying only on the recommendations of family or friends (Liang, Ekinci, Occhiocupo & Whyatt, 2013). This characteristic allows consumers to feel much more comfortable in sharing their personal experiences and opinions without the concern of revealing personal identities (Goldsmith & Horowitz, 2006). Furthermore, the development of electronic media has potentially enabled the reach of e-WOM communication to access wider audiences (Stauss, 1997). Thus, e-WOM information can be exposed to a potentially unlimited number of internet users at a fast speed (Lee & Youn, 2009). Moreover, internet users engaging in two-way communication allows them to read or browse all online information from others, as well as share information and resources with others (Wang, Shen & Sun, 2013). Ordinary people can distribute ideas and opinions quickly and easily through the internet (Christodoulides, Nichaelidou &



Argyriou, 2012). Therefore, individual consumers have a greater power to influence others within online communities. This unique characteristic engages more consumers to participate in online discussion, thus increasing the volume and spread of e-WOM (Goldsmith & Horowitz, 2006).

In a recent study, e-WOM is considered to be one of the most important facets of interpersonal communication among online consumers about a company, product or service (Cheung & Thadani, 2012). The increased number of online users sharing e-WOM globally indicates a growth in the level of trust in e-WOM and its value in the form of interpersonal communication (Christodoulides, Michaelidou & Argyriou, 2012). Marketing literature has recognised the interpersonal influence through WOM communication. Prior studies have found that consumers perceive e-WOM as more trustworthy and persuasive than traditional media such as print ads, personal selling, and radio and television advertising (Wang, Shen & Sun, 2013). It has been found that marketing information is more about product attributes, technical specifications or product performance, whereas e-WOM is a type of consumer-created information, and is, therefore likely to be more relevant to a product's end user than promotional information from a marketer (Lee & Youn, 2009). Thus, as e-WOM is a consumer- created information about the product, it is more likely to be user-oriented information. The information is more likely to be inclined towards personal experiences of using a product, or about the product's performance in a real-world situation (Chen & Xie, 2008). These discussions indicated that e-WOM is useful because it is perceived as less biased, and is viewed as having more credibility than information promoted by a company (Merlo, Eisingerich & Auh, 2014).

### **2.3.2 E-WOM impact**

E-WOM marketing research further taps into the trend of the online user activities of creating, modifying and collaborating on content online, in order to identify the potential marketing meanings.

#### **2.3.2.1 Positive e-WOM**

Consumer-generated e-WOM communication through online channels is increasingly taking the power of engaging consumers with the business (Ahrens, Coyle & Strahilevitz 2013). For example, e-WOM can help companies in promoting their brand and products online to more potential consumers (Dellarocas, 2003). Positive e-WOM from a majority of online user comments and recommendations can influence a consumer's perceived brand preference and brand loyalty (Gruen, Osmonbekov & Czaplewski, 2006). Thus, the more positive the e-WOM communication about the product, the more willing consumers are to try the product and trust the brand (Huang, Cai, Tsang, & Zhou, 2011). Furthermore, if consumers are willing to share positive reviews with more online users, the e-WOM chain will then be longer and have wider ripple effects on other marketing activities (Huang et al., 2011). As a result, marketers strongly encourage consumers to communicate positive e-WOM messages in online communities (Andreassen & Streukens, 2009; Merlo, Eisingerich & Auh, 2014). For example, some companies reward existing customers for successful e-referrals through e-WOM. In this way, e-WOM can be seen as a way of helping companies gain new customers (Ahrens, Coyle & Strahilevitz, 2013).

It can be seen that a company's response to e-WOM can directly influence the return of consumers to the business (Jayawardhena & Wright, 2009). If companies are receptive to customer feedback and recommendations, customers are encouraged to be more engaged with the company as they feel that their feedback and comments are valued

(Merlo, Eisingerich & Auh, 2014). Customers who participated in e-WOM communication are more likely to show loyalty to the brand and product (Ha & Perks, 2005). From this point of view, e-WOM plays a relational role in strengthening the tie between customers and company.

#### **2.3.2.2 Negative e-WOM**

Negative e-WOM normally arises from customer dissatisfaction (Willams & Buttle, 2014). Online consumers are more likely to spread e-WOM when they are dissatisfied with a product or service (Lee, Noh & Kim, 2013). These complaints are voiced in different ways with different effects on the business (Lee, Noh & Kim, 2013). Recent research has further classified negative WOM communication into two categories based on the intention of consumers contributing e-WOM (Cheng, Lam & Hsu, 2006). First, it could be an aggressive complaint with a specific intention of retaliatory action against sellers in order to hurt a business. Second, it can simply be a communication mechanism to warn others of a consumer risk. Therefore, the negative e-WOM can be seen as a way for online consumers to express their own dissatisfaction and a way to help others.

#### **2.3.3.1 Motivations**

The motivations for consumers to participate in negative e-WOM communication can be categorised into four groups. The first motivation to post negative e-WOM relates to preventing others from experiencing the same problems they have experienced. When dissatisfaction occurs, consumers often feel a desire to prevent others from experiencing a similar problem (East, Hammond & Lomax, 2008). This type of negative e-WOM is based on the belief that an individual should take responsibility for others by providing a form of recommendation or warning. Secondly, scholars argue that negative e-WOM is a type of online interaction, which implies that a part of the consumer communicating their

negative experience is that the consumer can also express their emotions through negative e-WOM communication. (Zeelenberg, Wetzer & Pieters, 2007). When a consumer experiences psychological uncertainty, disappointment or regret, they tend to have clear and planned goals for communicating negative e-WOM (Zeelenberg, Wetzer & Pieters, 2007). These goals may include expressing their expectation, searching for advice or stressing their negative emotions. In this situation, the response they receive from others may be very influential in determining whether the goal for disseminating negative e-WOM is achieved. On the other hand, when a consumer is experiencing anger and frustration, the venting feeling and taking revenge becomes the goal for spreading negative e-WOM (Zeelenberg, Wetzer & Pieters 2007). When consumers do not expect any response, the message from others may be less influential. Therefore, a consumer's response to negative e-WOM may differ, depending on the emotions they experience at that time. Thirdly, negative e-WOM communication is for consumers to reduce the cognitive dissonance of a purchase behaviour. The negative message is shared with others to justify their own purchase behaviour and in order to avoid repeating uncomfortable situations in the future (East, Hammond & Lomax, 2008). Finally, dissatisfied consumers engage in negative e-WOM communication to vent their dissatisfaction about the business through explicated advice from others, or sharing negative information in order to obtain advice on problem solving from others (Williams & Buttle, 2014). This form of negative e-WOM communication aims to search for help or get advice from others. These four main motivations for online consumer participation in negative e-WOM communication reflect the main purposes of the negative e-WOM interaction activities. These discussion activities can gain a huge amount of attention from online consumers.

### **2.3.3.2 Negative e-WOM influences**

The concern about the influence of negative e-WOM is becoming significant (Williams & Buttle, 2014), as negative e-WOM communication is not normally easy to notice, but it can be spread faster than positive e-WOM (East, Hammond & Lomax, 2008). There is some evidence to show that negative e-WOM has a stronger impact on consumer attitudes and product evaluations than positive information (Cheng, Lam & Hsu, 2006). Researchers have found that consumers tend to pay more attention to negative e-WOM when they are evaluating products (East, Hammond & Lomax, 2008). Therefore, a dissatisfied consumer might spread negative e-WOM to more people than satisfied consumers (Cheng, Lam & Hsu, 2006). If the negative e-WOM is adopted by more and more online consumers, the e-WOM dissemination activities further reinforce the credibility and reliability of the negative message or information (Williams & Buttle, 2014). Furthermore, as the information spreads rapidly online, negative information can have far-reaching effects on a larger circle of potential consumers, and the problem or issue has the potential to be over-stated through the vast communication channels. As a result, more potential consumers could be influenced when they encounter the product evaluation. This results in substantial negative impacts on sales, company reputation, revenue, and market share (Hickman & Ward, 2013). Moreover, this scenario can create an opportunity for competitors to collect marketing intelligence from these online social networks, and capitalise on this negative information in order to gain a competitive advantage. As a result, negative e-WOM dissemination intensifies the negative impact on product, brand, company reputation, and estranges current customers, potential customers and other stakeholders.

Failure to respond well to negative e-WOM is especially influential in creating further negative e-WOM. In some extreme situations, negative e-WOM spreading can

affect the whole business, and therefore crisis management processes are employed to recover the issues (Lee & Cranage, 2014; Williams & Buttle, 2014). For example, businesses may give additional compensation to the consumer over and above full compensation following a service failure. However, although a number of studies (Senecal & Nantel, 2004; Cheng, Liam & Hsu, 2006; Hickman & Ward, 2013) have suggested relevant strategies for responding to negative e-WOM, it is still a challenge for businesses to effectively control the spread of negative e-WOM.

The above discussion has established that positive e-WOM helps to form positive attitudes among information receivers, whilst negative e-WOM can lead to a more negative attitude about the product. However, although negative e-WOM has the potential to gain more attention than positive e-WOM, consumers tend to be less receptive to negative information when they are familiar with the company or brand (Chatterjee, 2001; Hickman & Ward, 2013). Thus, some companies attempt to engage the consumers by continuously providing promotional information through other communication channels in order to strengthen the positive image of the brand, and influence the consumers' opinion of their products (Mayzlin, 2006). Moreover, some firms actively participate in e-WOM communication in order to effectively prevent the impact of negative e-WOM (Lee & Youn, 2009). However, as information directly from a company is perceived as less trustworthy than personal responses, the influence of e-WOM from a company would not have a great impact on a consumer's e-WOM evaluation and adoption.

### **2.3.3 E-WOM credibility**

There is some research which has focused on how consumers evaluate the credibility of online information, and how online consumers adopt e-WOM which ultimately influences their purchase intention and other decision-making behaviours. Although it's well-known that e-WOM plays an important role in product purchase

assistance to help consumers with decision making, consumers face difficulties in evaluating the quality and credibility of information from both positive and negative e-WOM (Chatterjee, 2001). For online consumers, determining the credibility of e-WOM has become even more difficult, because marketers have attempted to influence e-WOM by encouraging consumers to review products to generate positive e-WOM. Some businesses even go so far as to post positive reviews about their products themselves (Chatterjee, 2001). Therefore, consumers often look for a variety of cues when determining the quality of online information (Goldsmith & Horowitz, 2006).

Past research has reported that argument strength, source credibility and confirmation of receivers' prior beliefs are the major determinants of perceived e-WOM credibility (Cheung, Luo, Choon & Chen, 2009; Yoon, 2012; Hsu, Lin & Chiang, 2013). For example, Yoon (2012) argues that an e-WOM message sender's prior knowledge can influence the quality of e-WOM content. An e-WOM from people who have had experience of using a product has a higher level of credibility than one from others (Senecal & Nantel, 2004). Their purchase experience and satisfaction with their purchase determines the quality of e-WOM arguments (Yoon, 2012; Hsu, Lin & Chiang, 2013). Furthermore, consumers usually evaluate the authority and quality of messages by judging the reputation of the communication platform and other participants (Merlo, Eisingerich & Auh, 2014). For example, e-WOM messages from a recommender who has been rated with a higher score by a reliable recommender system is perceived as more trustworthy (Yoon, 2012). Specifically, an opinion leader who has been identified as a special online user with sufficient knowledge about the product, and who can provide reliable advice and recommendations for online consumers. The information from opinion leaders is perceived as highly credible by online users. Their discussion activities overcome the limitations of influence from an offline relationship or social status and reputation, and have a great influence on other online consumers' opinion formation,

opinion adoption and decision-making processes. Therefore, it is important to address online opinion leaders in this e-WOM spreading study.

## **2.4 Opinion leaders and e-WOM**

Research identifies that some online members are more likely to provide useful information to other community members (Gu, Konana & Rajagopalan & Chen, 2007). They are also more likely to respond to other consumer questions. These online consumers who can engage in multiple communities are more likely to be innovative with technology and new products (Dahalander & Frederiksen, 2012; Ren et al, 2012). Rogers (1995) postulated that these special consumers can be identified as opinion leaders who can facilitate WOM communication. In an online community, an opinion leader is defined as an individual who has the ability to influence the e-WOM conversation within the community and shape the way that other members talk about the topic (Huffaker, 2010).

### **2.4.1 The characteristics of opinion leaders**

Traditional opinion leaders are defined as individuals who influence the purchasing behaviour of other consumers in a specific product domain (Flynn et al., 1996). They are a special type of consumer; they normally are interested in, and knowledgeable about, a certain product category (Sun, Youn, Wu & Kuntaraporn, 2006; Sen & Lerman, 2007). They often visit stores to gain knowledge of a product system, and read the relevant product information to gain more knowledge for the product category that is of particular interest to them (Shoham & Ruvio, 2008). These characteristics of traditional opinion leader have been inherited into the discussion of online opinion leader's characteristics. There is evidence from past research to demonstrate that online opinion leaders are more likely to engage in online discussion



and conversation, and are more likely to search for information from other sources (Sen & Lerman, 2007; Gupta & Harris, 2010; Eck, Jager & Leeflang, 2011). The term ‘‘e-fluentials’’ is used to describe those opinion leaders who spread information via the Internet (Hunt, 2006). These opinion leaders are deemed as experts in their specific product domain; they desire to participate and to share e-WOM information within the community (Van den Brink & Rusinowska, 2013). In this way, they are different with other online consumers (Gnambs & Batinic, 2013). They are more socially motivated to participate in discussion and share their opinions and information within the community, and they take on the role of an interpersonal communicator and active discussion participant (Kaiser & Bodendorf, 2012).

#### **2.4.3 Opinion leader’s credibility**

Past research has found that e-WOM that is generated from a reliable source tended to lead to high levels of e-WOM adoption intentions (Hoch & Kozlowski, 2014; Huffaker, 2010; Gu et al., 2007). Research reveals that an opinion leader’s recommendations and opinions tend to be more reliable than other individual consumers, and their opinions tend to be more likely to be accepted (Shoham & Ruvio, 2008). Past research on opinion leadership has linked the issue of credibility to concepts such as persuasion, social influence, expertise and trustworthiness of the discussion message (Venkatraman, 1989; Awad & Ragowsky, 2008; Huffaker, 2010; Hoch & Kozlowski, 2014). These studies indicate that the reason why e-WOM from opinion leaders has a significant impact on online users’ decision-making and opinion adoption is their level of credibility in the discussion community and its social influences on other community members (Sun, Youn, Wu & Kuntaraporn, 2006).

A group of studies argue that credibility is very important for an opinion leader to build trust and to increase influence on e-WOM adoption (Huffaker, 2010; Forman, Ghose, & Wiesenfeld, 2008). Hollander (1961) argues that leadership is obtained when people engage in the group activity long enough, and other members can recognise their contribution to the whole community goals (as cited in Forman, Ghose & Wiesenfeld, 2008). Forman, Ghose and Wiesenfeld further emphasize that the opinion leadership establishment is a developmental process based on the time spent in discussion communities (2008). The study of social influence theory pointed out that although opinion leaders spend a longer time in online communities, only the length of time they spend on watching the interaction flow or the length of time of interaction with other people is explicit to other online members (Huffaker, 2010). Showing their understanding of community discussion development is essential for an opinion leader to build credibility (Huffaker, 2010). Huffaker's study highlights that the credibility of an opinion leader is highly related to the trustworthiness, which is built through the length of time spent within a community and perceived by other online users.

The above discussion provides an understanding of opinion leaders' credibility, and how it is built through the length of time spent in an online community as well as through interaction with other online users. The leadership is established through an ongoing process, and as such, the influential status resides in the dynamic of the online discussion activities in the discussion development.

#### **2.4.2 Online opinion leaders and innovation diffusion**

Online opinion leaders are usually interested in innovations, such as new ideas, practices or objects (Kaiser & Bodendorf, 2012). This is especially evident for new products (Kaiser & Bodendorf, 2012). One stream of research discussed the mediation role opinion leaders have in the diffusion process (Riegner, 2007; Gupta & Harris, 2010;

Kaiser & Bodendorf, 2012). Rogers (1995) has suggested that diffusion is the process that individuals communicated an innovation through the media channels over a period of time with social community members. Past study apply the diffusion theory to an e-WOM study to emphasise that online opinion leaders are normally early adopters of new products; they are more likely to report and spread detailed information about the new product and their personal experience to more consumers (Andreassen & Streukens, 2009; Kaiser & Bodendorf, 2012;). When online consumers feel the innovative information is complicated and hard to understand, or they lack sufficient knowledge about innovative products, they are more likely to ask questions and seek reliable information from online communities and opinion leaders (Clark & Goldsmith, 2005; Riegner, 2007). Opinion leaders play an important role in explaining the information of new products to potential consumers, as well as answering questions from these users (Godes & Mayzlin, 2009; Gupta & Harris, 2010). In this instance, the interactive communication with an opinion leader creates meaning for the consumer to explore diverse expertise in the form of innovative information. The e-WOM interaction can evoke consumer need recognition, assist their information search, and help evaluation of alternatives. Opinion leaders act as an innovative information provider, interpreter and assistant in the consumer decision making process. They also act as a helper to other consumers in reducing uncertainty about new products by providing useful information, explanations and suggestions (Clark & Goldsmith, 2005; Godes & Mayzlin, 2009). In this instance, opinion leaders play a significant role in the process of acceptance of e-WOM, and further influence consumer purchase decision-making.

Therefore, research suggests that marketers should provide free trials for opinion leaders to use new products, and encourage them to write online comments in order to eventually help the business to promote a new product or service (Eck, Jager & Leeftange, 2011). In this instance, marketers expect the opinion leader to be a positive opinion

presenter about the new product or service, and to disseminate more positive e-WOM to more online consumers.

#### **2.4.4 Opinion leadership and discussion activities**

There is a stream of research which centres on opinion leaders' social identity and social status, as well as their influential power in the discussion topic and community discussion development (Forman, Ghose & Wiesenfeld, 2008; Hoch & Kozlowski, 2014; Huffaker, 2010). Several studies suggest that a high level of engagement in an online discussion community led to a high level of sociability; community members perceive opinion leaders according to the communication volume and the number of their supporters (Hoch & Kozlowski, 2014; Huffaker, 2010). These discussions indicate that opinion leadership are naturally established based on the interaction among online community members. The leadership is built on social relationships with other online members through continuous online information exchange activities to gradually gain the trust of the community and leadership social status. Therefore, the e-WOM interaction and communication process creates social structures that influence the social behaviour within online communities (Wasko & Faraj, 2005; Butler, 2001).

One study of organisational behaviour analysed online community structure, and found that opinion leaders take a central position in the community and take a central role in connecting with many other members of the community and have great influence on group discussion activities and the process of spreading e-WOM (Huffaker, 2010). A recent study by Forman, Ghose and Wiesenfeld (2008) adopts social network analysis to study online communities, and indicates that online opinion leaders actively interact with many community members, and the centrality of characters enables them to gain powerful influence in shaping e-WOM around the discussion topic. These discussions emphasise the centrality of the opinion leadership position, enabling opinion leaders to influence

other online members' opinions and the community discussion. However, exactly how opinion leaders gain this influential power from these activities and the outcomes of activities remains unclear.

Based on the above theoretical discussion, it is clear that opinion leadership establishment is an ongoing process, and an opinion leader's influence resides in the e-WOM interaction activities. They establish their leadership position through the e-WOM discussion, and influence other online consumer e-WOM discussions and adoption. It is argued that a new direction for research should focus on the study of opinion leaders' activities and leadership establishment in e-WOM dissemination.

## **2.5 Research gap**

The literature review from the previous sections indicates that an online community creates more chances for consumers to share, seek, exchange, and discuss information about brands and businesses. This information generates a large amount of global e-WOM that can influence consumer consumption behaviour, business reputation and shareholder profit. Specifically, business marketers need to pay more attention to negative e-WOM spreading in order to prevent serious negative impacts on their businesses. Unfortunately, although marketers can monitor an e-WOM communication trend, they are far from being able to control the self-organised online community discussion activities and negative e-WOM spreading process.

Meantime, marketers have understood that opinion leaders are the crucial influential force that leads online consumers' discussion activities and they can be classified as a special segment to be targeted to help business minimise the impact of negative e-WOM spread. However, the establishment of leadership is an ongoing dynamic process residing in the interaction activities. Some important questions in this area of research remain unclear. For example, past research has pointed out that opinion leaders establish their leadership status through their e-WOM interaction activities, and

they increase their influence through the online communication by enhancing their interpersonal communication credibility. But, what do opinion leaders exactly do to build up their leadership gradually? What roles do they intend to take during the discussion with other online users in the process of negative e-WOM spreading? And how do their discussion activities and role-taking evolution influence other members' opinions and eventually influence the community discussion development? These questions indicate a need for a theoretical understanding of the dynamics of opinion leadership emerging in the negative e-WOM spreading process to find out how these opinion leaders influence others through their interaction activities and role-taking behaviour in the process. Marketers can also gain a better understanding of stimulating and influencing opinion leaders in their attempt to intervene in negative e-WOM spreading to gain control of the dissemination process. To address this research gap, it is essential to understand the nature of opinion leader interaction in real discussion communities to discover the opinion leadership establishment and its evolution in the negative e-WOM spreading process. The underpinning theory for this research is discussed in the following section.

## **2.6 Role Theory**

Role theory is a well-applied social science theory. It originally stems from a theatrical metaphor ("role") which reflects the patterned and characteristic behaviour assumed by social participants (Broderick, 1998). It states that human behaves in different ways depending on their social identity and situation (Biddle, 1986). The theory provides a perspective to discuss social issues. The current research questions involve the discussion of an opinion leader's role-taking and role evolution in online communities. Role theory could be the major fundamental theory to explain the questions under examination.

### **2.6.1 The basic ideas of Role Theory and its relevance to current research**

Role theory concerns role-taking behaviour, and offers an opportunity to explore the individuals' role-taking in a social context. It allows researchers to discover a dynamic behaviour from participants to present a "holographic" process of a social issue. For the marketing issue of negative e-WOM dissemination, the e-WOM discussion creates a context that involves opinion leaders and other online consumer participation in a large amount of e-WOM interaction. The conversation between participants changes continuously according to discussion topic and discussion volume. Therefore, the adoption of role theory in the current study enables researchers to discover the dynamics of e-WOM interaction within an online community.

Further, role theory is derived from social penetration theory, social interaction theory, and social exchange theory (Broderick, 1998). The origin of role theory indicates that it concentrates on the interactive behaviour between individuals within a social context. Past research of online community indicates that online discussion forum structure is dependent on the communication between online members, and the social structure within an online community is constituted by the online members' interaction (Johnson, Safadi & Faraj, 2015). Thus, opinion leaders in each community are naturally established based on their discussion development. The adoption of role theory offers current study a premise that online community opinion leadership emerges from observable interactions. Therefore, role theory adoption is expected to enable the current research to analyse opinion leader e-WOM interaction to identify their roles in the online discussion, and to answer the research questions.

In addition, role theory focuses on an explanation of social exchange behaviour that strongly ties with social positions (Biddle, 1986). It addresses that individuals with different social positions may take different roles in a social context, and that the social

position changes can lead to their role taking evolution within that social context. During the development of an online discussion, an individual's social position changes, depending on the content of the conversation and its influences on others. These changes are more evident in the leadership establishment, which is the process of how an individual gradually gains a leadership social position through discussion and information exchange. Therefore, role theory can be adopted to discover the opinion leadership evolution, depending on their social position changes in the community during the negative e-WOM dissemination process.

## **2.7 About this research**

This current research aims to explore the emergence and role evolution of opinion leadership in an online community. The study has a special focus on opinion leader's behaviour and role evolution in negative e-WOM dissemination within an self-organised online discussion forum. The research was conducted by thematic analysis to explore the dynamics of leadership establishment and role-taking in the community to elaborate on opinion leader influences on the process of negative e-WOM dissemination. Particularly, this study addresses the following research questions:

1. How does online opinion leadership emerge in an online community following negative WOM?
2. What types of online opinion leadership roles emerge based on the interactions and consumer sentiments within an online community?
3. How does the role of an online opinion leader evolve over the course of negative e-WOM dissemination? And
4. What are the theoretical and managerial implications for consumer researchers and practitioners in understanding the emergence and evolution of online opinion leadership within a negative e-WOM context?



## **2.8 Summary**

This chapter reviewed past research in the stream of e-WOM study. The literature review addressed e-WOM values in self-organised communities for consumers and businesses. Particular attention was paid to negative e-WOM for its uncontrolled negative impact on businesses, brands, consumers and stakeholders. Past research identified opinion leaders as an important force that can influence online consumer negative e-WOM adoption, and that can eventually influence negative e-WOM dissemination. Importantly, past researchers integrated social influence theory, diffusion theory, and community structure theory to analyse opinion leader influence in e-WOM exchanges within online communities, and tried to identify opinion leader influential force on e-WOM dissemination. These discussions shed light on the leadership establishment process through e-WOM. It has been discussed that opinion leader activity and role-taking behaviour during e-WOM discussions and the leadership establishment process would be dynamic, depending on discussion context changes. The literature review points out one important research gap: that there is a lack of theoretical and practical understanding of the dynamics of leadership establishment through e-WOM communication.

Based on the literature review, this study is designed with a specific focus on the dynamics of negative e-WOM communication in an online community to discover the opinion leader activities and their influences on the community discussion. The following chapter will introduce the research questions and explain the research methodology and research design.

## **Chapter Three: Methodology**

### **3.1 Introduction**

This chapter will further explain and discuss the overall research design, data collection method, and data analysis method design. Some encountered methodological issues and relevant literature will be highlighted throughout the discussion.

### **3.2 Rationale for qualitative research design**

Qualitative research has a grounded philosophical base (Berg, 2004). It has been applied in social and behavioural science research, and it is designed to discover the sociocultural world, and interpret and understand social behaviours (Hesse-Biber & Leavy, 2011). The intention of qualitative research is to allow the researcher to examine different social situations and communication behaviours in order to interpret the meaning of a life experience (Hesse-Biber & Leavy, 2011). These objectives are very different to quantitative research methods, which generally test hypotheses by analysing relationships between multiple variables. Furthermore, the key features of qualitative research enable researchers to understand events processes, and to adopt an interpretive stance towards activities and the meaning of behaviours. Therefore, the fundamental assumption of qualitative research and its key features fit well with this research. It is more likely to address the purpose of the research questions than pure quantitative research.

As the present research questions are exploratory in nature, qualitative research is deemed to be more appropriate as opposed to a quantitative approach. Furthermore, the objective of the research is to gain a deeper understanding of opinion leadership establishment as a process, an objective which requires an interpretation of the dynamics of leadership establishment in detail. The intentions of qualitative methods fit well with

these objectives. Moreover, the current study involves consideration of the leadership establishment process and the negative e-WOM dissemination process. The adoption of a qualitative research method can provide interpretation and understanding of the meaning of these processes, as well as the meaning of opinion leader behaviour in the processes. Therefore, the qualitative research method was applied to the current study to better address the research questions.

### **3.3 Overview of research design**

This study comprises two stages:

In the first stage, a dataset was collected from an self-organised online community, and the opinion leader was identified by analysing community member contributions to the discussion. A matrix was used to measure the community members' contributions to the community discussion in order to identify the opinion leaders from among them.

Secondly, a qualitative analysis method was applied to analyse the dataset and to address the research questions in detail.

### **3.4 Data collection method**

Opinion leaders are typical innovators or early adopters of new technologies and the relevant products. To understanding their behaviour, we need to collect data about the most current products discussion community. iPhone 6 and 6 plus are smart phone designed with the latest technology and just released on September 19, 2014. The online discussion about these products attracts large number of consumers to share their opinions and experiences in a fast speed. The communication among these online consumers reveals the online opinion leaders' interaction behaviour and provides rich data for the study of opinion leadership establishment. Therefore, the discussion communities about iPhone 6 and 6 plus were explored to fit with the research design.

### **3.4.1 Criteria for choosing data source**

In an attempt to explore the emergence and role evolution of opinion leadership within an online community following a negative WOM dissemination, the dataset should contain “ground truth” information showing interactions between online opinion leaders and their followers. The specific *MacRumors* online community was selected based on several criteria. Firstly, the data should be a reflection of the natural process of emergence of an online opinion leader. Secondly, the discussion platform must not be business- or company-founded, and it should be a self-organised online discussion community. Thirdly, the dataset should represent a whole discussion process that shows the emergence and evolution of an online opinion leader’s role-taking process. Fourthly, the dataset should only focus on a negative e-WOM discussion and spreading. Lastly, the dataset must be a current dataset, and should focus on only one issue that is discussed in the online community.

#### ***3.4.1.1 MacRumors.com discussion forum***

The dataset for this study is a compilation of discussion threads collected from the MacRumors.com discussion forum, an online discussion community dedicated to user-generated Apple news, rumours, product reviews, and brand discussions. This forum is not Apple Company sponsored or founded, but organised by a group of Apple product users and professionals who are interested in the latest Apple technologies and products.

The forum is an active online community which focuses on discussing Apple products, brand-related issues or industry-related issues. It contains more than one million discussion threads where the members can join and discuss relevant topics. The forum provides a discussion platform for registered members to post a large amount of words, or to upload pictures, videos and links in the discussion context.

#### ***3.4.1.2 The online members in the forum***

An individual who is interested in the Apple brand, the company, relevant news or brand-related rumours can register online to become a member of the community by providing personal information. When the membership is confirmed, registered members can log in to the discussion forum with a personal ID to voluntarily join any discussion thread. Within the community, online members participate in the online discussion by posting their own ideas and opinions regarding the thread topics. They interact with each other by citing and responding with different opinions. The interaction and information exchange is fast and intensive. For people who do not hold membership, they can browse the website and read the content, but cannot participate in any discussion.

Registered forum members are people who are interested in Apple news or rumours. They are more likely to keep abreast of the brand and products, and are likely to follow the updates on different topics, and participate in different discussions actively and regularly.

Some of the members are experts or professionals related to product design. They may have been identified as a material engineer or mechanical designer. Some of the members are media workers such as BBC journalists or magazine designers. These members have advanced knowledge in their areas of expertise and can contribute extra knowledge in the discussion.

#### ***3.4.1.3 The event***

Apple launched the 4.7-inch iPhone 6 and the 5.5-inch iPhone 6 Plus on September 19, 2014 in the first wave of countries: Australia, Singapore, Germany, France, Hong Kong (China) and Japan. Millions of Apple fans pre-ordered the new products online. The bigger screen and thinner product design gained some good reviews

across various social media. However, negative rumours about how the new iPhone bends in pockets reported by the first-wave country users caught the attention of Apple users and fans immediately. iPhone bending became a central discussion topic for the users and fans on the forum.

#### ***3.4.1.4 The dataset***

In this research, one completed thread is selected which focuses on the new iPhone 6 (Plus) bending issue discussion in order to trace the emergence of opinion leaders following the negative e-WOM spreading process. As the discussion threads are user-generated and -organised, the discussion activity can reflect the natural process of the emergence of online opinion leaders and the role evolution during the e-WOM spreading process.

The initial post of the discussion is a complaint message about the latest iPhone 6 product, and this negative opinion is the main storyline throughout the whole thread, which suits our research objectives to address the negative e-WOM spreading process. The topic of whether iPhone 6 (Plus) bending is a design issue was addressed in the forum. Some members believed the iPhone 6 (Plus) bending was a serious product design issue and suggested that other members should widely spread the negative views to other social media. However, some members believed that the bending was not an issue, due to a lack of significant evidence. The argument from both opinion positions developed around the topic, until a final agreement was formed for the discussion topic.

The first post of the thread was posted on the 21<sup>st</sup> of September and ended on the 26<sup>th</sup> of November in 2014. The discussion thread lasted about two months. 1,911 posts from 557 online members were collected (2 of them were banned for using foul language) for further analysis.

### **3.5 Data analysis method**

The first step of the study was to identify the opinion leader(s) from the data. However, the big challenge for the researcher was to find a suitable method of identifying the opinion leader from online members in the dataset. The following sections will show how the opinion leader in the online community was identified in this study using a robust approach.

#### **3.5.1 Identifying online opinion leaders**

The method of identifying opinion leaders has focused on the adoption of the method of identifying traditional opinion leaders (Lyons & Henderson, 2005; Zhang & Dong, 2008; Johnson, Safadi & Faraj, 2015). The main purpose of past research is to determine whether the characteristics and behaviour of traditional opinion leaders are similar to the characteristics and behaviour of online opinion leaders. These studies applied a similar measurement for identifying traditional opinion leaders to identifying the online opinion leaders. The main measurement factors which were considered were factors such as enduring involvement, perceived knowledge, innovative behaviour, computer competence and personality traits (Lyons & Henderson, 2005; Zhang & Dong, 2008). However, although traditional and online opinion leaders shared similar characteristics, there are significant differences between them. Thus, there are some characteristics for traditional offline opinion leaders, such as the opinion leader's personality traits, and enduring involvement, which are very hard to identify in the online environment.

#### **3.5.2 Centrality of online users**

Some researchers focused on the degree of centrality of online users by applying a quantitative research method of calculating the Spearman correlation coefficient value

to identify the opinion leaders (Bodendorf & Kaiser, 2009). This method addressed the interactions between different online users across different forums and different discussion topics. Marko Logic Networks analysis is one example to detect an online opinion leader by measuring the online user's attributions to the online discussion across all the communities. The measurement matrix is applied to assess online consumers' social networking attribution, content attribution and inherent attribution to identify the opinion leaders (Zhang, Li, He, & Wang, 2014). These three attributions are deeply rooted in the formation of a directed tie between individuals and the degree of homophily between individuals to investigate their leadership position (Zhang, Li, He, & Wang, 2014). Although this method involved accurate computing and prediction, some opinion characteristics such as inherent attributes could not be identified in current online discussion forums. Furthermore, in the dataset, the members are normally all Apple brand fans or Apple product users who possess a high level of homophily. Therefore, the measure of the homophily between community members has no significant influence on identifying the opinion leader.

### **3.5.3 Text mining and social network analyses**

A number of researchers focused on online opinion leader power by text mining and social network analysis to identify them in the online community (Li & Du, 2011; Kaiser & Bodendorf, 2012). These papers applied different frameworks, or used different measurements to identify online opinion leaders. For example, Li and Du (2011) present a framework which considered the multifaceted association among bloggers by investigating the factors of blog content, author properties, and reader properties to identify online opinion leaders. The method relied on the total number of readers for the hot blogs. However, while this approach could evaluate the degree of agreement among online consumers and opinions, it paid less attention to the interactions between



individuals. This approach may be suitable for dataset analysis in an online blogging context, but it cannot fit in in other online community discussions.

#### **3.5.4 Social network analysis and attribution analysis**

Ma, Liu, Tian, & Li (2012) integrate social network analysis and attribution analysis to identify online opinion leaders in their research. The study introduced an attribute matrix - “eight degrees attribution index” - which includes the connected degree, the attention degree, the activity degree, the influence degree, the diffusion degree, the centrality degree and the post length to identify the online opinion leaders (Ma et al, 2012). This social network analysis method in the study emphasises the structure of the social network and the relationship between members in the online discussion community. The eight-degree attribution measurement provides a better vision as to how the interaction activity happens among the members according to the relationship between conversations to identify opinion leaders. This method enables the researcher to consider an individual online consumer’s ability to participate, the relationship with other online members, and the influential power residing in the discussion interaction. Therefore, this method is suitable for the current study dataset and the purpose of identifying opinion leaders from a group of online consumers.

Ma et al. (2012) also demonstrated the usage of the attribute matrix in a real case of online discussion. The example dataset was retrieved from a self-organised online discussion forum that focused on one social event. This example dataset was similar to the present study dataset, which enabled the researcher to apply the same analysis method to the current data analysis. Therefore, the method of attribute matrix measurement could

fit in with the present study and can be applied to identify opinion leaders in the current study dataset.

### 3.5.5 Attribute Matrix

The original attribute matrix contains eight degrees of measurement (Ma et al., 2012). The following equation is the detailed explanation for the attribute matrix retrieved from the original research:

“ (1) *the Connected Degree,  $Coi$*

*$Coi = In-di + Out-di$ ,  $In-di$  (in-degree) stands for the total number of posts who received;  $Out-di$  (out-degree) stands for the total number of posts who replied to others. This index can measure the heat level and the enthusiasm of the users to participate in the discussion.*

(2) *The Attention Degree,  $Ati$*

*$Ati = \sum Ci$ ,  $\sum Ci$  stands for the number of clicks. This number of each post can be got by the public opinion monitoring platform directly.*

(3) *The Activity Degree,  $Aci$*

*$Aci = \sum Fi$ ,  $\sum Fi$  stands for the frequency of discussion in one event. The more contents the participant posted during the event, the more active the participant was.*

(4) *The Influence Degree,  $Ini$*

*$Ini = \sum Agi / \sum Rei$ ,  $\sum Agi$  (the number of agreements) stands for the number of posts which have the same attitude with the main-creator;  $\sum Rei$  (the number of responses) stands for the number of posts who had received. The types of attitude are positive, neutral and negative respectively.*

(5) *The Diffusion Degree,  $Dii$*

$D_{ii} = \sum A_i / \sum P_i$ ,  $\sum A_i$  stands for the number of people who replied to the post  $i$ ,  $\sum P_i$  stands for the number of posts which reply to the post  $i$ . This number can measure the extent of replies. The greater the number, the greater the diffusion of this post.

(6) The Centrality Degree,  $C_{ei}$

The centrality degree is a quantitative indicator which can measure the location of each node in the network topology, indicating the depth of the node in the network. This index can be used to find the core members of the network.

(7) The Post's length (Degree),  $T_i$

$T_i = \sum W_i$ ,  $W_i$  is the total number of words in the post  $i$ . Generally, the longer the post, the more influential the post.

(8) The Change of Average Path Length (Degree),  $\Delta L_i$

$\Delta L_i = L - L_i$ ,  $L$  stands for the average path length, and  $L_i$  stands for the new average path length after the node  $i$  has been removed. The node who has larger  $\Delta L_i$  play a very important role in the connection of the whole network that is the key node." (Ma et al., 2012, p.485).

The quote above explains the meaning of the "eight degree" measurement that is derived from the original research (Ma et al., 2012). Considering the current study dataset, most of the eight degrees measurement is applicable, but one of the "eight degree" measurements (the Attention Degree) seems not to be so easy to apply. As quoted above, the attention degree is used to measure how much attention a post gains from others. The measurement of Attention Degree involves counting the number of clicks for each post to reflect the extent of the degree value. However, in the current study, the function to trace the number of clicks of each post is not available in the dataset obtained from the *MacRumors.com* discussion forum. As a result, the Attention Degree could not be evaluated by the number of clicks. In addition, the number of posts cited by other

members in the current forum can be used to reflect the degree of attention that a post has attracted from members. Therefore, in our study, the number of citations for individual posts was counted to reveal the value of Attention Degree.

Another consideration for the the data analysis is the measurement of the Connection Degree. The community members in the current dataset built up their connection by citing and responding to posts from each other. The number of citations and the number of responding posts could reveal the value of the attribution. However, the number of citations has been used to measure the value of the Attention Degree. Thus, in this study, the Connecting Degree could not be repeated and included in the data analysis.

Furthermore, the measurement of Activity Degree considers the frequency of participation in the discussion activities. In the current study, the total number of posts can be counted and can reflect the value of the Activity Degree.

According to the above discussion regarding the “eight degree” attribution matrix, the final attribute matrix which will be used in the current study contains a Seven Degree measurement to identify the opinion leaders in the dataset (see Table 1). The Seven Degree attribute matrix was used to measure the online member contributions in the discussion forum (see Table 2) so that the most influential figure within the community, the opinion leader, can be identified from other online consumers.

Table 1. The attribute matrix variables' calculation and meaning

Attributes	Calculation	Meaning
<b>D1 : The Attention Degree, <math>Ati</math></b>	$Ati = \sum Ci$ ,	$\sum Ci$ stands for the number of citations. This number of each post can be cited by other members in the discussion.
<b>D2: The Activity Degree, <math>Aci</math></b>	$Aci = \sum fi$	$\sum Fi$ is the total number of the posts in the dataset. The more posts the participant contributes during the discussion the more active the participant was.
<b>D3: The Influence Degree, <math>Ini</math></b>	$Ini = \sum Agi / \sum Rei$ ,	$Ini = \sum Agi / \sum Rei$ , $\sum Agi$ (the number of agreements) stands for the number of posts which have the same attitude with the main-creator; $\sum Rei$ (the number of responses) stands for the number of posts who had received. The types of attitude are positive, neutral and negative respectively.
<b>D4: The Diffusion Degree, <math>Dii</math></b>	$Dii = \sum Ai / \sum Pi$	$\sum Ai$ stands for the number of people who replied to the post i. $\sum Pi$ stands for the number of posts which reply to the post i, and this number can measure the extent of replies. The greater the number, the greater the diffusion of this post.
<b>D5: The Post's length Degree , <math>Ti</math></b>	$Ti = \sum wi$	$Wi$ is the total number of words in the post i. Generally, the longer the post, the more influential the post.
<b>D6: The Change of Average Path Length Degree , <math>\Delta Li</math></b>	$\Delta Li = L - Li$ ,	$\Delta Li = L - Li$ , $L$ stands for the average path length. $Li$ stands for the new average path length after the post i has been removed. The post who has lager $\Delta Li$ play a very important role in the connection of the whole network that is the key node.
<b>D7: The Centrality Degree, <math>Cei</math></b>		The centrality degree is a quantitative indicator which can measure the location of each node in the network topology, indicating the depth of the node in the network. $Cei$ stands for the number of posts under the main post creator. The greater the number, the greater the centre of the post.

Table 2. Online opinion leader Attribute Matrix measurement

<b>PARTICIPANTS / SEVEN DEGREES</b>	<b>D1</b>	<b>D2</b>	<b>D3</b>	<b>D4</b>	<b>D5</b>	<b>D6</b>	<b>D7</b>
<b>p<sub>1</sub></b>	d <sub>11</sub>	...	d <sub>13</sub>	...	...	d <sub>16</sub>	d <sub>17</sub>
<b>p<sub>2</sub></b>	d <sub>21</sub>	...	d <sub>23</sub>	...	...	d <sub>26</sub>	d <sub>17</sub>
<b>p<sub>n</sub></b>	d <sub>n1</sub>	...	d <sub>n3</sub>	...	...	d <sub>n6</sub>	d <sub>n7</sub>

### **3.6 Thematic analysis**

After identifying the opinion leader, the next step of the research concerns the qualitative analysis of the identified opinion leader's activities in the online discussion forum.

There are some approaches to qualitative analysis which may be useful in this data analysis such as content analysis, thematic analysis and grounded theory. However, the thematic analysis method is considered to be the best suited for the current study.

According to Braun and Clarke (2006), thematic analysis is defined as: "A method for identifying, analysing and reporting patterns within data." (p.79). This definition indicates that thematic analysis is concerned with searching patterns and themes across a dataset. This method allows the researcher to discover different themes, to link and merge categories which have similar meanings from the dataset, and to discover the meanings embedded in the theme and the relationship between them.

The present research focuses on an opinion leadership emergence analysis by looking through the e-WOM discussion in order to identify patterns amongst the codes, as well as thematic connections with regards to the opinion leader's activity during the process. Therefore, thematic analysis is best suited for the study. Thematic analysis allows researchers to identify, analyse and report on patterns found, which suits the nature of this study (Attride-Stirling, 2001). This method also provides an opportunity for researchers to identify new themes not found in the current literature, offering a new direction for future research (Joffe & Yardley, 2003).

Lastly, compared with other analysis methods such as narrative analysis, content analysis or grounded theory which are normally tied to specific theory, thematic analysis is more flexible and can be used within a broad theoretical framework, meaning that this

unique advantage enables thematic analysis to fit in with the current study's theoretical foundation better than other analysis methods.

Therefore, among the different types of qualitative analysis, a thematic analysis approach was selected and applied to the current study. The following section will provide an explanation of the thematic analysis procedure applied.

### **3.6.1 Explanation of thematic analysis procedures**

Thematic analysis, as recommended by Braun and Clark (2006) includes six stages, namely getting familiar with, initial code formation, theme generation, theme review, naming of themes and report writing.

The thematic analysis begins with reading the dataset to get familiar with the content. During this stage, open notes were taken to mark the topics embedded in the data. The Nvivo program was then used to code data into meaningful groups. After this, different group nodes were put in potential themes to draw a thematic map identifying the relationship between themes. Each theme has a clear name to be organised into a logical and coherent context.

### **3.7 Summary**

This chapter provides a description of the research methodology in the current study. A qualitative method was employed to answer the research questions. A secondary dataset comprised of a completed discussion thread was retrieved from *MacRumors.com*'s discussion forum, and 1,911 posts were selected as the research dataset for further analysis.

The study was planned to be undertaken in two stages. The first stage of the study considered the social relationships and the contributions of online members in a discussion in order to identify the opinion leader within the discussion community. The literature review suggested an attribute matrix measurement to detect the opinion leaders.



To fit with the current database, a new Seven Degree attribute matrix was discussed and planned for opinion leader identification. In the second stage, a thematic analysis approach was selected to discover the dynamics of leadership establishment and the e-WOM discussion process. The results from the opinion leader identification analysis and the thematic analysis will be presented in the following chapter.

## Chapter Four: Data Analysis and Findings

### 4.1 Introduction

The current study aims to explore the emergence and evolution of opinion leadership in an online community.

This chapter will describe and summarise the key findings obtained from the data analysis. It first presents the results of the Seven Degree attribute matrix measurement and social relationship analysis for opinion leader detection. The opinion leader will be identified based on the measurement results. Next, a discussion volume trend line is used to illustrate the number of post changes during the discussion process. Then, the change of discussion insensitivity shows community member sentiment changes through the discussion process. At the end of this chapter, the findings responding to the research questions will be presented.

### 4.2 Results of identifying opinion leaders

The Seven Degree attribute matrix was applied to measure the online members' contribution to the discussion. The results showed that the top ten important people in the dataset were the owners of the following IDs: *hasanahmad*, *vgamedude*, *braintumor*, *fmcary*, *Surf Monkey*, *jpeg42*, *Steviejobz*, *scrtagntman*, *derpert*, and *Bobo03* (see Table 3). The ID *hasanahmad* retained the most influential position throughout the majority of the measurement ranking.

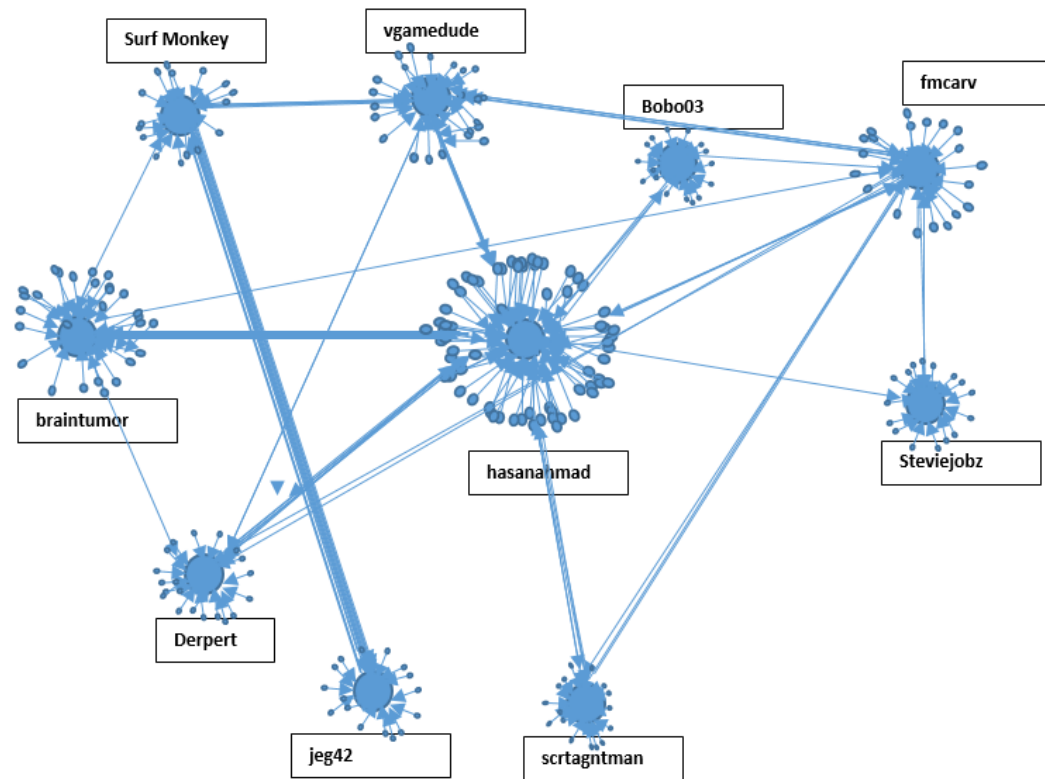
In addition to the attribute measurement results, a social relationship graph presented the relationship between these important IDs (see Figure 1). The community member *hasanahmad* was identified as the central discussion participant in the relationship map. The opinion leader identification result from the relationship map is

consistent with the result of the Seven Degree Attribute measurement. Therefore, the member *hasanahmad* emerges as clearly the key online opinion leader in the dataset. The subsequent analysis of opinion leader activities will focus on e-WOM communication between *hasanahmad* and other online members in the dataset.

Table 3. Top 10 important people in iPhone bending thread

Ranking	ID	The Attention Degree	ID	The Activity Degree	ID	The Influential Degree	ID	The Diffusion Degree	ID	The Posts length Degree	ID	The Change of Average Path Length Degree	ID	The Centrality Degree
1	hasanahmad	66	hasanahmad	85	hasanahmad	19	Bobo03	0.89	braintumor	4014	jpeg42	16	Steviejobz	647
2	vgamedude	46	vgamedude	44	braintumor	11	Steviejobz	0.81	hasanahmad	3011	hasanahmad	15.9	hasanahmad	421
3	braintumor	40	braintumor	42	fmcav	10	fmcav	0.72	Surf Monkey	1976	Bobo03	15.3	scrtagntman	308
4	Surf Monkey	39	fmcav	42	vgamedude	7	derpert	0.71	vgamedude	1894	scrtagntman	15.2	braintumor	220
5	fmcav	36	Surf Monkey	37	Steviejobz	6	scrtagntman	0.7	scrtagntman	1203	braintumor	15.1	vgamedude	205
6	jpeg42	27	jpeg42	27	Bobo03	6	hasanahmad	0.53	jpeg42	958	Surf Monkey	13.25	Surf Monkey	192
7	Steviejobz	27	Steviejobz	21	scrtagntman	5	braintumor	0.5	fmcav	915	derpert	10.23	jpeg42	149
8	Bobo03	18	scrtagntman	26	derpert	5	jpeg42	0.44	derpert	733	vgamedude	9.8	fmcav	147
9	derpert	14	derpert	24	Surf Monkey	2	vgamedude	0.41	Bobo03	712	fmcav	8.9	Bobo03	131
10	scrtagntman	10	Bobo03	22	jpeg42	2	Surf Monkey	0.33	Steviejobz	682	Steviejobz	8.75	derpert	43

Figure 1. The relationship map of 10 main discussion contributors of iPhone bending thread



### **4.3 The fluctuation of online discussion volume**

A graph of discussion volume change (see Figure 2) illustrates the posting number changes during the discussion period. The discussion started from the initial post of the discussion thread related to release of new iPhone 6 (plus) in September, 2014.

A case of one of the new iPhones bending in a pocket was reported by a consumer in the *MacRumors* discussion forum on the 21<sup>st</sup> of September, 2014. This negative e-WOM immediately caught the attention of consumers. A large volume of discussion about the iPhone bending issue developed within the forum until the 29<sup>th</sup> of November, 2014. The discussion volume fluctuated during these three months due to the intensity of negative e-WOM communication. A trend line was presented to illustrate the changes of posting number each day within these three months (see Figure 2).

Figure 2. iPhone 6 bending discussion volume changes

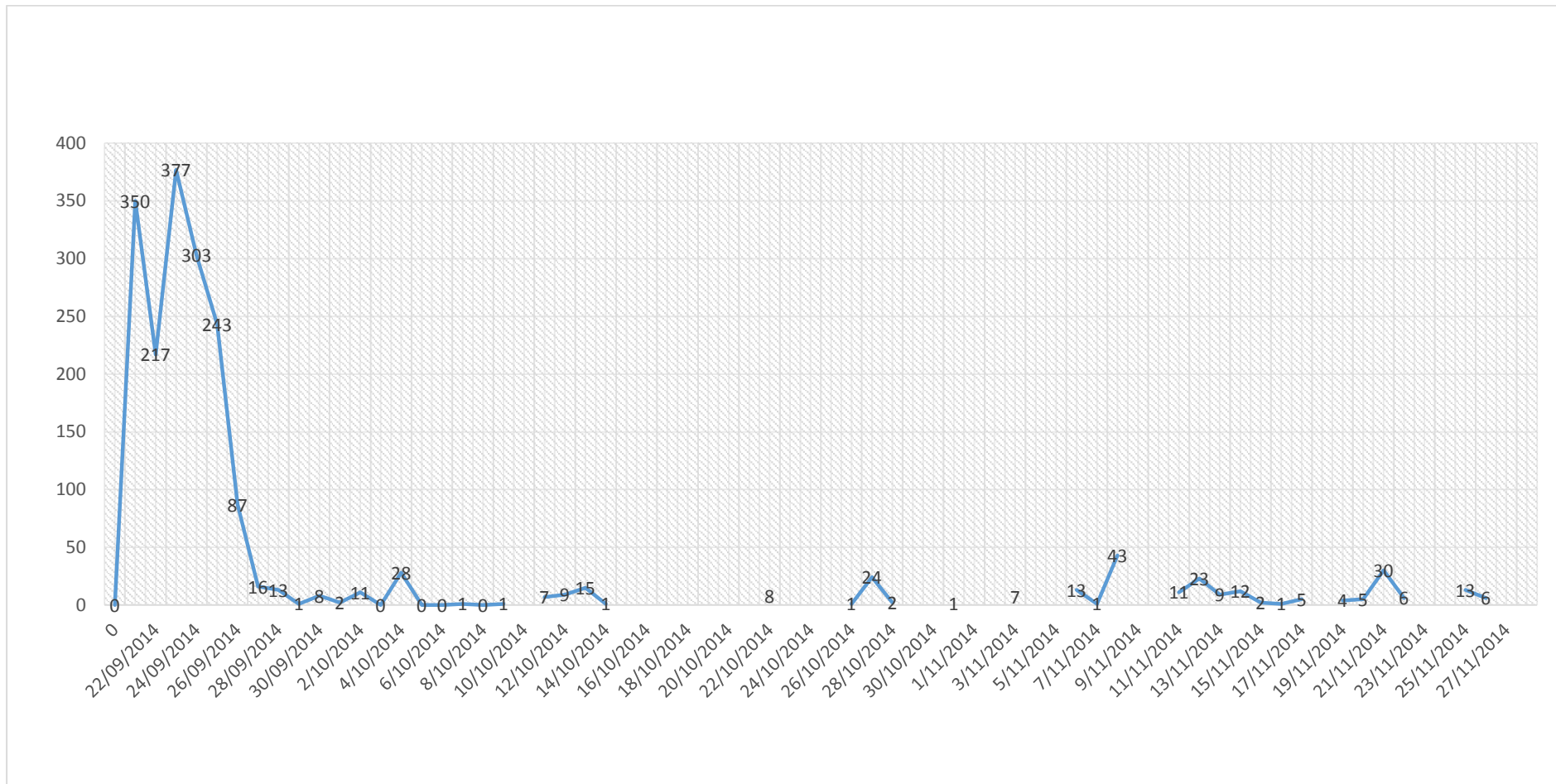


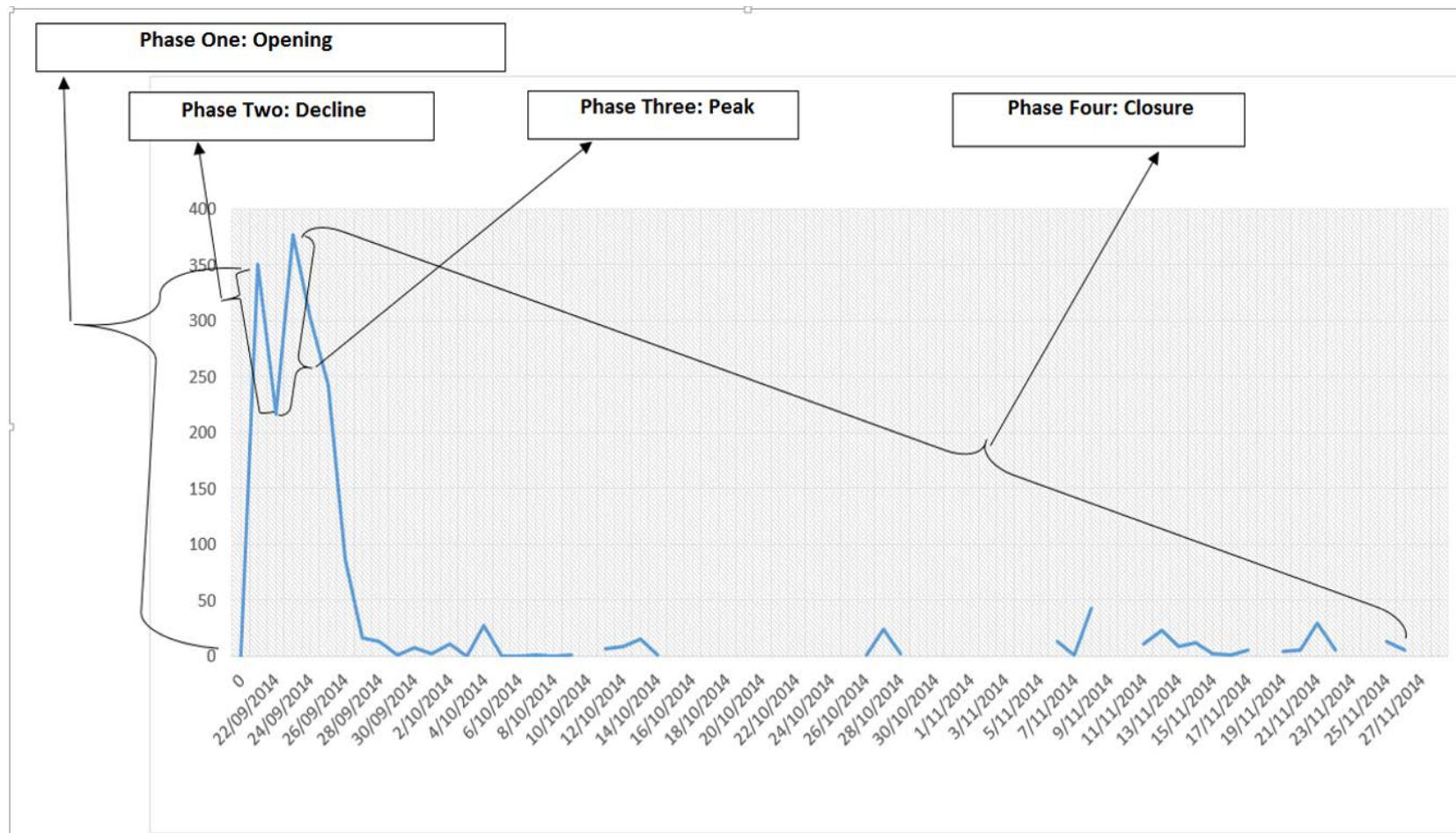
Figure 2 illustrates that the number of posts reached a peak of 350 on the first day after the first post appeared online. This shows that the first post about the iPhone bending issue attracted a great amount of attention in a very short period of time at the beginning of the negative e-WOM development. But after that, the discussion volume dropped dramatically to 217 new posts on the second day. On the third day, a large amount of interactions among the community members occurred, resulting in the post number increasing to a new high of 377. However, afterwards the total post number decreased to 303 on third day, then reached its lowest record at 1 post on the ninth day. In the days following, the number of posts fluctuated in a small amount. Since then, there was no significant change in the posting number until the closure of the discussion thread.

Based on the iPhone 6 bending discussion volume change trend line (Figure 2), the discussion was divided into four main phases to show the discussion intensity (Figure 3):

- Phase One: Opening
- Phase Two: Decline
- Phase Three: Peak
- Phase Four: Closure

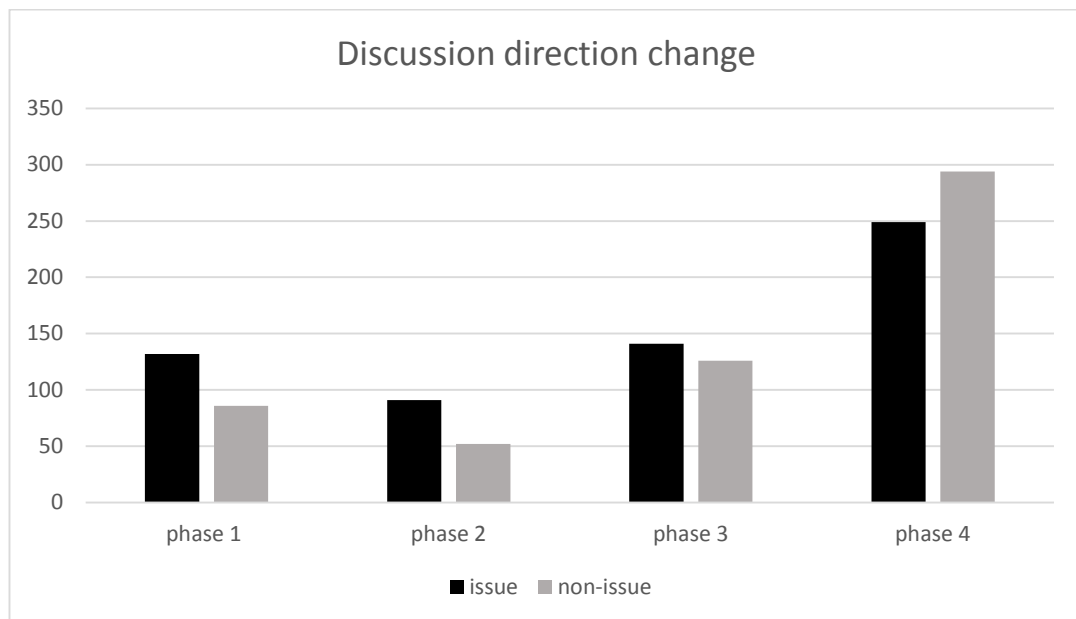


Figure 3. iPhone bending discussion's four phases



During these four phases, the discussion of whether the iPhone 6 bending in a pocket was a design issue was developed. Some of the community members believed that the new iPhone was bending in pockets due to a design fault, and should be addressed as a major issue (herein termed **issue** in Figure 4.). However, some other members argued that the iPhone 6 bending in a pocket was not a design fault and it should not be perceived as an issue (herein termed **non-issue** in Figure 4.). The debates and arguments between the two opinions carry on throughout the four phases. The number of supporters for the two opinions were different in different phases (see Figure 4). The following discussion addresses the number of opinion supporting message changes through the four phases.

Figure 4. The number of supporters for two opinions



#### 4.4 The changes of the number of supporters for two opinions

Figure 4 illustrates the two contrasting opinions representing a number of changes about the iPhone bending over the four phases. In phase one, the number of people who believed the iPhone bending was a serious issue was 30% more than the number of people

who believed that iPhone bending was a non-issue. In phase two, although the number of posts decreased, the ratio between the two groups remained as the same. Up to phase three, the number of the people who believed the iPhone bending was a serious issue increased to almost double the number of people who believed that the iPhone bending was a non-issue. However, there was significant growth in the number who believed that the iPhone bending was a non-issue in phase three. The number of people in these two major discussion groups became much closer in phase three than before. In phase four, the number of people who believed that the iPhone bending was a non-issue was 30% more than the number of people who believed that the iPhone bending was a serious issue. Overall, the fluctuation of the discussion shows that negative opinions about iPhone bending dominated the discussion during the earlier phases of the discussion. However, in the later phases, this negative opinion gradually turned to neutral. This finding provides explanations and insights on the influential power of online opinion leader over the different discussion phases.

## **4.5 Thematic analysis results**

### **4.5.1 The analysis strategies**

According to the trend line of discussion intensity in Figure 2 and the changes of the dominant opinion in discussion Figure 3, each post in the discussion thread was analysed with a special focus on the opinion leader discussion activities and the associated roles in each of the phases. A thematic analysis technique was used to analyse opinion leader's activities by the following steps.

Firstly, the discussion posts was reviewed in each phase, and special attention was paid to the posts from the opinion leader. Based on the meaning derived from the flow of communication between the opinion leader and the other online participants, and opinion leader's main activities at each phase were identified. Then each activity was given an

initial code and recorded in Nvivo 20 software. Figure 5 is an example of the initial coding generated from the dataset. The name given to each activity was based on the objective of each activity that was perceived from the interactions.

**Figure 5.** An example of an initial coding framework

<p><b>hasanahmad</b> macrumors 6502a Join Date: May 2009</p>	<p>Quote:</p> <p>Originally Posted by <b>macenied</b> 2  <i>IMO some people are not objective here - they purchased the 6 + and therefore it must be good. This does not help and does not make the 6 + better.</i></p> <p><i>I'm curious what Apple will do with this issue.</i></p> <p>It's not an issue</p> <p><a href="http://www.cultofmac.com/248603/iphone-5ses-are-bending-in-peoples-pockets/">http://www.cultofmac.com/248603/iphone-5ses-are-bending-in-peoples-pockets/</a></p> <p>Did apple do anything do about <a href="#">this</a> ? Did you bother posting about <a href="#">it</a> ? Your views are exponentially biased due to its thinness so your view that it contributes to it when thinness does not have to do with bending it's the same frame as the 15s with components inside which are smaller</p>	<ul style="list-style-type: none"> <li>• Reinforce own opinion</li> <li>• Provide information from website links to support opinion</li> <li>• Mock others</li> <li>• Point out other members knowledge mistakes</li> <li>• Correct mistakes</li> </ul>
--	--	---

Secondly, all of these identified activities were analysed to find the similarities and differences among them. After that, similar activities were grouped together to form an activity category. Each of the category was given a more general name (see Figure 6.).

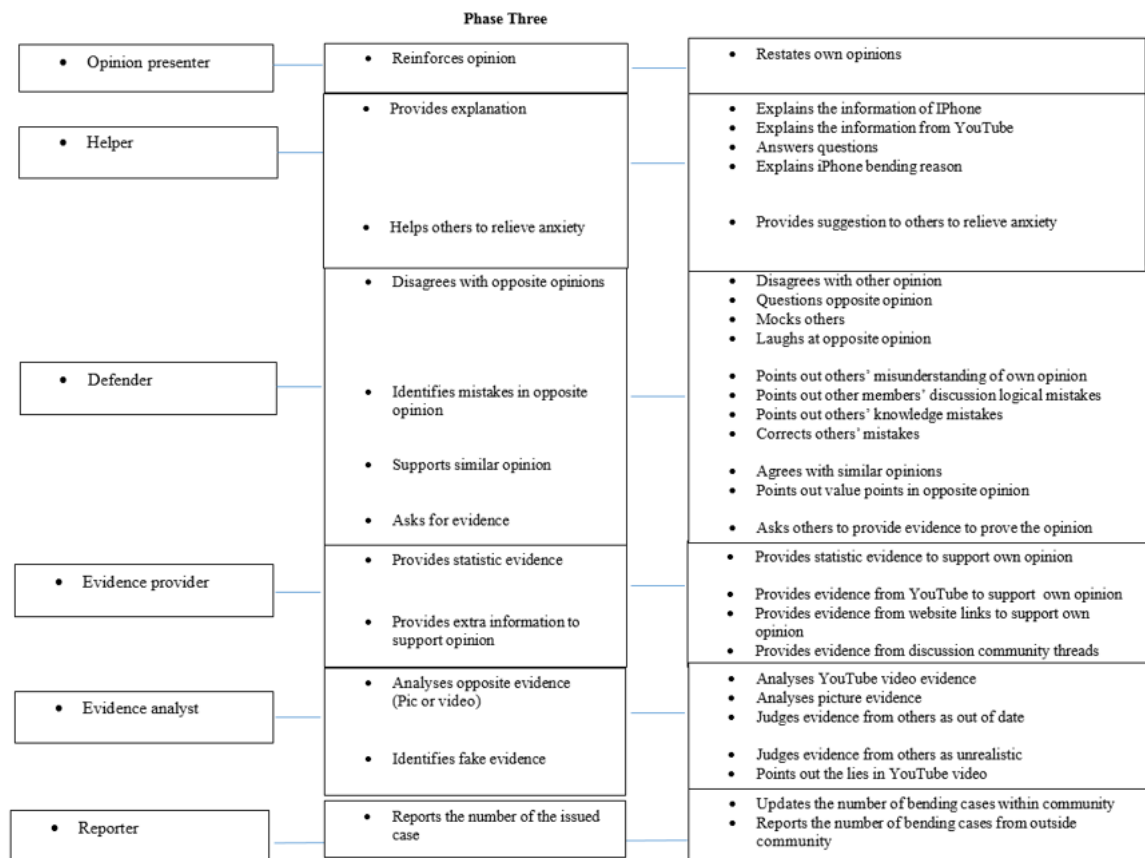
**Figure 6.** An example of a final coding framework after reduction of the categories in the initial coding framework

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Disagrees with opposite opinions</li> <li>• Identifies mistakes in opposite opinion</li> <li>• Supports similar opinion</li> <li>• Asks for evidence</li> </ul> | <ul style="list-style-type: none"> <li>• Disagrees with other opinion</li> <li>• Questions opposite opinion</li> <li>• Mocks others</li> <li>• Laughs at opposite opinion</li> <li>• Points out others' misunderstanding of own opinion</li> <li>• Points out other members' discussion logical mistakes</li> <li>• Points out others' knowledge mistakes</li> <li>• Corrects others' mistakes</li> <li>• Agrees with similar opinions</li> <li>• Points out value points in opposite opinion</li> <li>• Asks others to provide evidence to prove the opinion</li> </ul> |
|--|--|

Thirdly, each activity category and sub-categories are again revised to ensure each of them was given an appropriate name, and they were logically related to each other, while independent of each other.

Fourthly, the name of each final code was finalised to identify the similarities and differences. The main themes are emerged based on the similarities and differences among the categories. The roles of the online opinion leader are identified based on the main themes of opinion leader's activities, and opinion leader's interactions with other online participant in each discussion phase (see Figure 7).

**Figure 7. An example of final coding framework**



Finally, each role was revisited to ensure the names of the roles were appropriately given according to each associated activity. The details of the opinion leader's main activities and his roles in each phase are enclosed in Appendices 1 - 4.

#### **4.5.2 The online opinion leader's roles**

Eight roles of online opinion leader have been identified from the thematic analysis for opinion leader roles as shown in Table 4. The very first role of the opinion leader *hasanahmad* is the community member. When *hasanahmad* joined the thread, he had not been recognised as an opinion leader yet; he acted in the same way as other members in the community. His main activity was communicating with other community members. *Hasanahmad's* second role, helper, was also identified in the first phase. He took this role by helping other online members with explanations and answering other members' questions.

Moving in to the second phase, *hasanahmad* acted as opinion presenter who strongly stated, reinforced and continued to clarify his opinion to other online members. His behaviours revealed the role of presenting his own ideas. Another role taken by *hasanahmad* was that of a defender, as he started to identify the mistakes in statements of opposite opinion from other members and demonstrated disagreement with these opinions.

During the third phase, *hasanahmad* further acted as evidence provider, evidence analyst and reporter. In this phase, *hasanahmad* provided statistical figures and extra information to support his own opinion. These activities reflect the role of evidence provider. He also pointed out the mistakes in other members' posts and analysed each new piece of evidence provided by other online participants. These activities indicate the role of evidence in the discussion. Lastly, he kept updating the latest news on the topic and opinions for other online members to act as a reporter.

In the final phase, hasanahmad started to consider the negative impact of negative e-WOM from the discussion community on the company, and questioned the motives of negative opinions towards the brand. He acted as brand guardian to protect the brand from negative e-WOM.

These eight main roles have been identified from the online discussion context. The following section will provide a detailed explanation of *hasanahmad*, the opinion leader's activities and his role taking behaviour in the four phases.

Table 4. Opinion leader's activities and roles played in negative e-WOM development phases

Phase one		Phase two		Phase three		Phase four	
Roles	Activities	Roles	Activities	Roles	Activities	Roles	Activities
Community member	Cite others Respond to others	Opinion presenter	State opinion Reinforce opinion Clarify opinion	Opinion presenter	Reinforce opinion	Opinion presenter	Reinforce opinion
Helper	Explain iPhone bending reason Answer questions	Helper	Explain iPhone bending reason Answer questions	Helper	Provide explanation Help member to relieve anxiety	Helper	Provide explanation Help member to relieve anxiety
		Defender	Identify mistakes in opposite opinions Disagree with opposite opinion	Defender	Disagree with opposite opinions Identify mistakes in opposite opinions Support similar opinions Ask for evidence	Defender	Disagree with opposite opinions Ask for evidence Support similar opinions
				Evidence provider	Provide statistical evidence Provide extra information (links, pics, video)	Evidence provider	Provide statistical evidence Provide extra information (links, pics, video)
				Evidence analyst	Analyse opposite evidence (Pics & videos) Identifies fake evidence	Evidence analyst	Identifies fake evidence Analyse opposite evidence (Pics & videos)
				Reporter	Reports the number of the issued case	Reporter	Reports the number of the issued case  Update outside media reports
						Brand Guardian	Consider the negative impact on business Question the motives of negative opinions



### 4.5.3 The opinion leader's activities and the role evolution

This section will concentrate on the dynamics of the leadership establishment through the four phases. The discussion will focus on *hasanahmad* who has been identified as the opinion leader in the current dataset.

- **Phase one: opening**

The discussion thread began with an iPhone bending complaint post. The post described a scenario where the new iPhone was used at a wedding, but bent in a pocket. This post caught a lot of attention from the community as the new product had just launched in the first wave of countries a few days earlier. Many members had either purchased or pre-ordered the new devices. A large number of the community members immediately started to discuss the complaint post to find out why this may have occurred. The negative e-WOM was immediately noticed and spread quickly within the community. The e-WOM spreading led to a high volume of discussion about the topic. It appears that some members heard the news about the iPhone bending from other media channels, and believed that the iPhone bending was a serious issue caused by a failure in the product design. These opinions expressed the community members' negative attitude towards the new product, and their anxiety around product purchasing and usage. It is not surprising that the complaint post led to a large number of negative opinions, especially when the bending rumours appeared on the launch day. For example:

*“Bent right at the sim tray port, that has been a weak spot for the aluminum iPhones”*

*“Oh man, that's terrible. So alongside the protruding camera, the reduced capacity battery, the extra heat and the difficulty in picking it up - all negatives due to Apple's*

*obsession with thin devices - they're now also proven to be much more prone to bending."*

*"Apple's engineering should ensure that a \*mobile\* phone has sufficient casing strength to resist bending under normal usage conditions."*

However, some members believed that the iPhone bending was caused by careless usage of the product, and was not a product design fault. They argued several times how to carefully carry the product:

*"Apple sold you a perfectly functioning device, but it doesn't seem like you the product that best suits your real world needs. The end result is YOU damaged your phone."*

*"The plus is a phablet. You shouldn't be carrying this thing around in your pant pocket. It belongs in your purse.:"*

*"Wrong. OP (first post's ID) didn't buy a phone. He bought a phablet. Use it incorrectly = your loss. "*

Although both of the two different opinions were supported by online members, the negative opinion was supported much more than the other. However, in this phase the opinion leader did not post any opinion at this early stage. As the discussion went on, the attitude of the majority of members toward the opinion of brand design failure dominated the discussion direction gradually. A few more iPhone bending reports and pictures showed up in the community. Some important negative opinion contributors who held similar negative opinions

towards the product and company started to centralise the main opinions. Their continued negative opinion posts led to the number of negative messages increasing to a high degree, and the discussion heat reached a peak. The discussion context showed that the main motivation for participating in the discussion was to search for answers.

When the post numbers reached 367, at a very late stage of this phase, the opinion leader posted his first message to begin his role-taking as a community member. He replied to one post about a story of how the iPhone bent in normal daily life. Then the opinion leader took the role of helper, to help other online consumers by explaining the possible reasons for the phone bending and emphasised the owner's responsibility for that bending accident. This was the first time the opinion leader, as a community member, posted an opinion. Although his posts did not clearly or strongly show his opinion, the message conveyed his opinion tendency. However, his first couple of posts did not gain much attention among the members; his opinion leadership status had not been recognised. The negative opinion still dominated the discussion thread up to the end of this phase. This reflected the fact that the opinion leader's posts did not influence other members' opinions; as a member, he hadn't gained an influential status and did not have influential power.

- **Phase two: decline**

In the second phase, the discussion heat started to fall as the discussion about the iPhone bending was dominated by the negative opinion group, which became the mainstream of opinion in the community. The opinion of the community on the iPhone bending was that it was caused by a design fault, and was further clarified by some community members.

*“IMO Apple simply overshoot the mark of thinness in combination with the wrong materials (mainly Aluminium). I mean, thin is cool and light is cool. But bending is very uncool.*

Other members seemed not to be interested in discussing the same opinion repeatedly, and the discussion heat went down. It was noticeable that some members who had just got the iPhone or pre-ordered the new products paid attention to the discussion content. Some posts expressed their worries and their expectations.

*“This thread is making me nervous. I sure hope this isn't a widespread issue.”*

*“Wow. This is a scary thread. It's making me think twice about my 6 Plus...”*

At the early stage of this phase, the opinion leader did not post any messages. He seemed to observe the discussion development, and waited for the right time to express his opinion. During the time of observing the communication, he got familiar with the discussion history and identified the active discussion participants. Until the later stage of this phase, he directly targeted the most active community members and pointed out the mistakes in the negative opinion posts to disagree with their opinions. These activities reflect the fact that the opinion leader started to defend the opposite opinion, and took on the role of defender in the e-WOM interaction.

*“99% of the world didnt know and didn't care. move on like when it happened to iPhone 5 and 5S. it will happen with ANY device which is aluminium based if there is forced applied to it”*

*“i think you are over reaching the potential of this as a major issue. Anything that is aluminium will bend when force is applied to it. It happened to the 5 and it happened to the 5S and it happens to Sony Phones too which are thin. If you do a google search on the bending iPhones, you will get the same reaction at that time period of those launches as now, people over reacting.”*

He then clearly stated his opinion, and kept clarifying it in the following posts.

*“4 people out of 300 have this issue. People act like its 100 out of 300 have this issue. ANY ANY ANY product will have physical issues amounting to 1% and this is not even that.. please people...some logic...please.”*

*“Number of phones sold in first days : 10 million. If it were really an issue we would know by more than 3 users or even more than 10 throughout the web. ”*

*“3 people is not a story , it's statisticslly insignificant”*

These posts reflect the fact that the opinion leader started to take the role of strongly presenting his own opinion. His posts immediately caught the attention of previous negative opinion holders. These members started to question and refute the opinion of the opinion leader. He started to act as an active presenter to reply to the questions about his posts, and his own opinion to further re-affirm and reinforce his opinion. As a helper, the opinion leader answered the questions from others to gain visibility from more online members. His posts also attracted some new members to join the discussion. In this phase, although the opinion leader had not established his solid leading position, his opinion was clearly stated and reinforced. His posts had gained much more attention from other online consumers. In this stage, the

opinion leader's sociability was emphasised and he slowly gained the central role position of connecting with other members.

- **Phase three: peak**

Upon reaching phase three, the number of posts in the discussion reached a new peak. The debate was raging on whether iPhone bending in a pocket was a design flaw and whether it was a major issue for Apple products. Many members became very active in this phase because they were trying to find extra evidence to support their own opinions. In this phase, many pictures and videos from many countries were cited and linked to.

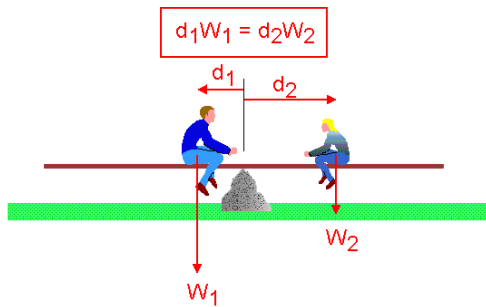
The statistical knowledge of the opinion leader helped him to make his opinion more persuasive. His opinion, along with providing statistically significant evidence to convince other online consumers, led to further development in the discussion. His knowledge about iPhone materials, bending forces, and social media helped him to gain credibility in the community. Some of his posts clearly presented his opinion and reflected his evidence provider role-taking by providing extra information and knowledge to other community members. For example:

*“It's not an issue. <http://www.cultofmac.com/248603/iphone-5ses-are-bending-in-peoples-pockets/>”*

*“that this is pure hyperbole and a non-issue”*

*“Dude do you KNOW what the Law of the Lever is? it does not apply to the internal hollow gap of the phone to fit smaller internals it applies to the force applied on a single*

point and where it is relative to the point of balance.



*the closer you are to the center of gravity, the greater the force down that can be applied. what does that have anything to do with a smaller hollow point which fits smaller internals when the frame thickness is the same. ”*

*“And bent aluminum indicates a weak anodized aluminum, so when a push is made in one direction it bends like normal aluminium and when it hits the grounds its dented like normal aluminium , were any phones aluminium dented by the impacts on the ground ? I don't believe so. If anything the gorilla glass cracked but not a dent in the phones themselves”*

The knowledge of the opinion leader helped him to strengthen the discussion quality and the trustworthiness of his argument, which led to the high credibility of his opinion on the topic. This knowledge also increased other members’ intention to accept the opinion of the opinion leader.

In this phase, the opinion leader also focused on the collecting of significant statistical evidence to take the role of evidence provider. He asked the online consumer who believed the negative opinion to provide more examples or reports to prove that the opinion of the

bending issue was a major design failure of the new iPhone 6 (Plus). He also asked people who claimed that they had a bending issue with their new phone to post a picture to prove their claims. His knowledge of the number of the iPhone bending reports across various media channels enabled him to confidently challenge the negative opinion.

*“Quote:*

*Originally Posted by PD13* 

*I googled to see if this was a common thing that was happening and this was the only thread that showed up, I made an account so I could share my experience so far. I'm just telling you what happened, it was a light bump, not even close to the force that should have been required to bend it. I've had significantly harder impacts to my 4s and never had any type of breakage or bending problems.*

*Could you post an image of your case itself?”*

*“Can you post the image of the case?”*

The opinion leader's challenge to the negative opinion enabled him to gain the central discussion position, and weakened the credibility of the negative opinion. On the other hand, to prove the negative opinion, the online members who believed in it had to find more evidence to support that opinion. Many members began searching online channels related to the opinion leader's request. To some extent, they had been led by the opinion leader to follow his discussion direction.

The opinion leader also criticised all the evidence provided by other online members. His evidence analysis posts pointed out the suspicious evidence and opinions to identify fake



evidence and repeated misinformation. These posts further established his leading position and status. For example,

*“What I find hard to believe in your case being a new poster in the more than 3 dozen YouTube videos with crash tests with even softer cases, none of them had a dent let alone a bent so I am inclined to believe the light bump was a significant one”*

*“Looking at the pictures. it's a good thing you showed full resolution because that looks like a phone which fell on the ground looking at the nicks all throughout the sides of the phone. no wonder it bent”*

The opinion leader judged and criticised the evidence, and gave feedback to the providers. In such a scenario, the opinion leader acted as an evidence analyst and judge to influence the discussion development. It seems that the opinion leader could feel his increasing influential power among the members, and he became a strong defender to point out the discussion mistakes, and to mock negative opinions to weaken their spread.

*“Well that's ridiculous just because you and your wife didn't bend your 5s doesn't mean others didn't. You see how ridiculous your argument looks now? It's isolated, just because 3 people have bent phones doesn't mean hundreds of thousands do as well. The anodized aluminium is the same process which means the thickness of the frame itself is the same but the internals got smaller. Look at any frame picture of both 6 and 5 and it's the same it's only the internals which got smaller”*

*“Some people here defending this as more than a potential issue seem to be really hoping that it is a big issue so that it validates their opinion on this matter. Almost narcissistic”*

As an opinion presenter and community helper, He also answered questions from other online members. He further emphasised his opinion and attitude that the iPhone 6 (Plus) bending was not a major failure of product design. The opinion leader also searched for and updated the bending reports across media to further take the role of reporter in support of his opinion. His skill in searching across a wide range of media strongly increased his credibility over other online members.

*“6 people after all the media attention today is still not a design flaw”*

As can be seen in this phase, the opinion leader further took the role of opinion presenter, evidence provider, strong defender, evidence analyst and reporter of current event status across media. He established his strong leadership status through these different roles. As a result, the community discussion contents started to follow his opinion and suggestions. Such role-taking behaviours reflected the fact that he had taken the role of leading the discussion direction and had taken the directional position of this negative e-WOM discussion development.

- **Phase four: closure**

In this phase, the opinion leader was aware that his posts had influenced the discussion direction in the community. His messages became more straightforward and referred to more reports from other media channels to further solidify the opinion.

*“where in the story does it suggest beyond macrumors as even the one image is from macrumors and the video is the one attempting to bend the phone. the twitter and facebook videos and newsfeed, i have gone through hundreds of them all are recycling the 4-5 images macrumors, 1 from france and 1 from the youtube video”.*

*“hello newbie. well its important because I think just 7 bent phones with ALL this publicity makes this issue statistically insignificant. the failure rate of a product begins at 4%, we are less than 0.001% right now”*

*“going from 6 users to 7 users is increasing by the hour? Your FUD is the reason why we can't have nice things. Be realistic. all news outlets are only using macrumors users and pictures as sources. nowhere else.”*

*“nearly 25 public cases here and twitter and facebook (search if you like) out of probably 8 million iPhones delivered all throughout the world. You would think there would be at least 100 people publicly talking about it to be even 0.1 percent of a problem and this is after every news outlet on tv, internet and radio has talked about it..its not like any iphone users are not aware. by now every iPhone user is aware, yet sitll just about 25.”*

These posts further reinforced the opinion leader's opinion presenter role and his opinion that the iPhone bending was not a serious issue of product design. These numbers and ratios not only confirmed the reliability of his opinion, but slowed down the number of negative opinion posts. At the same time, the opinion leader continued in his role of evidence analyst to

challenge the credibility of the evidence provided by other online members. These pieces of communication further reduced the negative opinions' reliability, and the negative opinions' influential power among the community members.

*“Most bends are fake admit it many post and then run away with 1 posts”*

Moreover, the evidence analysis and criticisms went further to question the motives of any negative opinion. These messages decreased the spread of the negative opinion, and encouraged other members to rationally think about the negative opinion. This behaviour reflected the fact that the opinion leader had become a brand guardian to offset the negative impact from the negative opinions.

*“your FUD is the reason why when people ask why do you keep posting is when you post stuff like that. Your FUD is the reason why I think people are inept in their perception”*

*“The crazy people are those who are hoping its an issue or making this seem like a bigger issue than it even is regardless if it is a real issue or not for a product.”*

The opinion leader's posts led the community members to further consider the purpose of posting these messages. It can be seen that the opinion leader fully controlled the discussion direction in this phase. Some members who believed that the iPhone bending was a serious issue quitted the discussion community, and as a result the discussion heat fell dramatically. It is also noticeable that the opinion leader also considered the negative impact from the discussion on Apple's business.

*“even as a non-issue hopefully this is a kick in the gut Apple needs to start spending money”*

These posts helped the opinion leader to gain more support from community members, as the messages reflected the expectation of all the members towards the brand and product.

*“So glad to here the news from Apple today only 9 reported this has given me some hope of obtaining one now. ”*

*“If there is only 9 that tell me this was user error or 9 very unlucky people I would be happy to still buy one with them results.”*

Up to the middle of this final phase, the discussion volume went down to an extremely low level. The main discussion members left the discussion community, and only a very small number of posts appeared in the following days. At the end of the thread, the final main opinion for iPhone bending remained neutral, and the negative message was eliminated. The opinion leader successfully stopped the negative e-WOM dissemination through his leadership establishment.

## **4.6 Answering research questions**

### **4.6.1 RQ1: The emergence of opinion leadership**

The results portray a dynamic process of opinion leadership emergence. The findings from this study elaborate the online opinion leadership establishment as an ongoing and dynamic process that resides in the opinion leader’s interaction with other online community members.

#### **Phase one**

The opinion leader did not gain his leadership at the beginning of the discussion. He acted the same as other members in the community, so his posts could not create any strong influence on other online participants’ opinions. However, it could be told from his later posts that his spend time to observe the interactions between other online members in this phase. This typical behaviour is consistent with the finding of Huffaker (2010) that the time opinion

leaders spend on getting to know the community members, the discussion topic and the main discussion contributors, helping opinion leaders in becoming familiarised with the discussion community, and it helps other community members to notice the opinion leader's participation in the discussion.

## **Phase two**

In phase two, the opinion leader kept reinforcing and clarifying his opinion to attract the attention of others. He targeted the main negative opinions and strongly defended his own opinion to gain attention, and to hype his own status in the community. During the discussion, the opinion leader provided clear, strong evidence and logical discussion to support his own opinion. His knowledge and logical thinking ability were demonstrated by a high quality of argument, and a building up of credibility in the discussion. As a result, other online members perceived his posts as valuable contributions to the discussion, starting to pay attention to his interaction with others. This results corroborate the fact that the knowledge and skill of an opinion leader are essential tools for building a strong argument which helps to establish leadership credibility and increase the influence on the discussion context (Kaiser & Bodendorf, 2012). It also reflected the past research discussion that about quality e-WOM discussion determining the e-WOM credibility and influencing the e-WOM adoption behaviour (Cheung, Luo, Choon & Chen, 2009; Yoon, 2012; Hsu, Lin, & Chiang, 2013)

It is worth noting that the opinion leader stated his opinion at a specific time, which is when the number of the negative post was beginning to drop to a low level. This seems to be a breakthrough time for the opinion leader to intervene in the negative discussion and to start establishing a leadership position. This particular phenomenon suggests that the discussion volume could be one of the factors in deciding when to intervene in the negative e-WOM

discussion. Specifically, when the community discussion was dominated by the negative opinions and the discussion intensity was high, the opinion leader's voice is hard to be recognised among the crowds. However, when the negative opinions became weaker, the opinion leader seems to have had a better chance of capturing the attention of others.

Furthermore, understanding the community members' expectation can also be helpful to identify when is the best time to intervene in the negative e-WOM discussion. In this study, the majority of members in the online discussion community are Apple product users or fans. Their expectations of the new iPhone design were that it would be thinner, bigger, fancier, and innovative, and with the newest technology. Many of the members either had the products or had pre-ordered the devices. However, when the negative opinion dominated the discussion community, the main opinion was that the iPhone bending was a major failure in product design. As community members' initial expectations towards the product were challenged. The negative opinion increased the members' worries and uncertainty about the product. Some members were not sure whether the bending concern was a serious issue, but the strong negative messages caught their attention, and some members reconsidered their order and delivery of the products. In such a situation, the online members tended to expect a more detailed explanation or clarification to the bending issue in order to reduce the dissonance between expectations and the negative information from e-WOM. Thus, their main motivation for participating in the discussion was searching for a reliable answer to address their concerns and gain an assurance in their purchase decision making. Therefore, when a dominant opinion has been voiced in the community for some time, the majority of online participants expected someone who could stand out to give more reliable and trustworthy information about the issue and someone who could strongly confirm a clear opinion towards the product. Therefore, this situation indicated a time for the opinion leader to show his presence in the online discussion community and to meet the expectations of online members.

### **Phase three**

In phase three, the opinion leader started gaining his leadership by demonstrating his extraordinary knowledge about the product line, the product design, and the product material. His knowledge was essential for him to persuade other online participants to believe in and adopt his opinion. This phenomenon is an evidence that opinion leaders' expertise knowledge is one of the main determinations for other consumers in adopting his opinions (Cheung, Luo, Choon & Chen, 2009; Yoon, 2012; Hsu, Lin, & Chiang, 2013).

In addition, the opinion leader's deep understanding of the discussion topic covered by media also increased the persuasiveness of his opinion and credibility. The ability to immediately access different online discussion channels, and the ability to identify and to collect relevant information are two main criteria for an opinion leader to gain a high credibility and leadership position in the online community. These special characteristics of online opinion leaders are significant apart from previous research. The definition of online opinion leaders in the past research have identified some characteristics, such as spreading information via the Internet (Hunt, 2006), expertizing in product domain (Van den Brink & Rusinowska, 2013), desire to share e-WOM (Van den Brink & Rusinowska, 2013; Gnambs & Batinic, 2013), and being motivated to participate in online discussion (Kaiser & Bodendorf, 2012). However, in the self-organised online discussion community, the opinion leader's credibility is largely based on the reliability of his discussion contents which are more likely formed from the information available in vast of media channels. Thus, it requires opinion leader to have an ability to filter this information quickly to identify the most valuable knowledge to form and support his opinion. Therefore, apart from those characteristics identified in the past research, mastery of the media coverage about the discussion topic and high ability to access and select information across multimedia channels can be another two important characteristics of online opinion leaders.



#### **Phase four**

In phase four, the opinion leader reinforced his leadership, by updating the latest news on the topic, in order to further strengthen the reliability of his opinion and to gain more support from community members who were sceptical about his opinion. These activities suggest the fact that the opinion leader paid close attention to the news reports on the discussion topic, and it is another characteristic that has been discussed in the past research (Sen & Lerman, 2007; Gupta & Harris, 2010; Eck, Jager & Leeftang, 2011). During the discussion, he clearly expressed his concerns about the impact of negative e-WOM on the brand and company. These interactions reflected his strong sense of moral responsibility to the brand and to other information browsers (Hickman & Ward, 2013).

In summary, and to respond to the first research question, the findings describe the opinion leader's behaviour in each stage during the discussion process, and highlight the purpose of each activity in the process of online opinion leadership emergence. The above analysis of the data shows that the opinion leader's activities change at each phase of the discussion, and that the online opinion leadership is established through the negative e-WOM communication process.

#### **4.6.2 RQ2: Different types of opinion leadership roles**

The earlier section elaborates on the opinion leader's interactions in each phase, and describes the leadership evolution process. Based on the analysis of opinion leader's activities, different roles of online opinion leader are identified. The role emergence was based on the discussion development and the expectations from other online consumers.

At the beginning of the process, the opinion leader acted as an ordinary community member took the role of opinion contributor. However, in the second phase, the opinion leader took the role of opinion presenter in order to express his own opinion. At the same time, the

opinion leader took on the role of defending opposite opinions, and clarifying his opinion to strongly and quickly establish his status in the community. Although the role of opinion presenter and opinion defender was not significant enough to distinguish the opinion leader among the community members, the opinion leader took these roles for clearer and stronger purposes than other online members. This difference is reflected in the opinion leader's role-taking being more strongly goal-orientated than others. The goal for the opinion leader in this stage was to persuade others to listen to his opinion. This phenomenon suggests that the opinion leader has a specific motivation to participate in the community discussion that is not as same as other online members. This specific motivation is to convince more online members to accept his opinion.

In following phase, the opinion leader further took on the role of evidence analyst to judge the validity of each piece of evidence provided by online members. At this stage, the community communication was fully controlled by the opinion leader. The entire community discussion focus was shifted to the evidence collection and judgement by the opinion leader's strong influences. This phenomenon strengthens the argument in the past literature that online opinion leaders are significant influencers (Sun, Youn, Wu & Kuntaraporn, 2006; Shoham & Ruvio, 2008). This result further indicates that the significance of the opinion leaders influences is controlling the online community discussion focus and the discussion direction. Rogers (1995) has argued that the opinion leader has an ability to facilitate the community discussion. Huffaker also addressed online opinion leader's ability to shape the way that other members talk about the topic (2010). Some more research further elaborated this ability in the studies of consumers' opinion adoption behaviour. However, the finding from the current study indicate that a true opinion leader can not only influence the other consumers' opinions and opinion adoption, but can also control and change the community discussion direction.

In the later phase, the opinion leader had gained a central position in the community. Some online consumers still needed reassurance for their purchase decision-making. Thus, the opinion leader further took the role of reporting information from official media to further confirm his opinion, and to help online consumers to eliminate the negative e-WOM influences. The identification of the role of a reporter in this stage confirmed the similar discussion in past research (Kaiser & Bodendorf, 2012).

At the end stage of the discussion, the opinion leader considered the negative e-WOM influences on the Apple brand and business. As this concern was from the opinion leader, the influence of opinion leadership enabled this concern to be further passed on to other online members. This reflected the fact that the opinion leader took the role of brand guardian for the business to stop the negative e-WOM dissemination. Although this role is important in influencing negative e-WOM spreading, it seems to be another new role that has not been well recognised by previous research. The identification of this role could add more meaning to the study of opinion leader behaviour in negative e-WOM literature. Additionally, in the self-organised online community, all community members are socially bonded towards the band. The posts of concerning about brand helped opinion leader to establish a close relationship with other online members within the community to ease the tensions caused by the intense debates in the earlier phases. Thus, the role of brand guardian created appropriate stance between opinion leader and other online members.

#### **4.6.3 RQ3: Opinion leader role evolution**

As stated in the above discussion, it is clear that the opinion leader establish his leadership through the process of taking different roles, in order to increase his influence on other consumers. Firstly, it was noticeable that the opinion leader took multiple roles in different phases. For example, in the first phase, the opinion leader only took two roles in the

discussion. But in the later phases, opinion leader gradually took six more roles in the negative e-WOM discussion. This difference reflects the fact that the opinion leader's role evolution is a dynamic process along with leadership establishment which follows the discussion development. As role theory explains, the role taking process presents a "holograph" process of leadership establishment. The process further elaborates the role taking differences dependent on the opinion leader's leadership status changes, and the e-WOM discussion development (Biddle, 1986).

However, although the online opinion leader took different roles in different stages, the individual role-taking behaviour could not solely complete the leadership establishment process. The role evolution process showed a specific sequence to explain opinion leader roles in the process of leadership establishment. The sequence of different roles indicates a correlation between each role and the linkage between each discussion stage. For example, to take the role of opinion presenter, the opinion leader had to be recognised as a community member first. Similarly, taking the role of opinion defender, the individuals had to be clear about their own opinion before that. Again, when the opinion leader gained more influential power by emphasising his own opinion, providing enough evidence, and defending against to persuade more consumers to believe and accept his opinion, he could then be more confident in taking the role of analysing evidence and reporting the news from official media. Therefore, in general, the opinion leader's previous role provided the basis for the later role and its impact on the discussion development. This phenomenon can be explained by the role theory that opinion leader's roles evolve in keeping with his social status changes in the online community and his understanding of how other online members perceive his social status changes (Broderick, 1998).

Furthermore, the research results show that some roles were taken by the opinion leader in multiple discussion phases. For example, the opinion leader took the role of opinion presenter, defender and helper in the last three phases. However, it should be noted that although the names of the roles are the same in these different phases, the intention of taking those roles was different. For example, in phase two, the key focus for the opinion leader was to take on the role of opinion presenter and opinion defender to firmly establish his opinion within the community. Although in phase three the opinion leader also took the role of presenter and defender to further reinforce his opinion, the intention of taking these roles was decreased, and the focus in that the stage slowly shifted to taking the role of evidence provider and evidence analyst. Similarly, in the last phase, the intention of taking these roles further decreased, and the focus shifted to taking the roles of evidence analyst and reporter. These gradual changes enabled the opinion leader to slowly gain the leading position to further affect negative e-WOM dissemination.

#### **4.7 Summary**

The purpose of this study was to explore opinion leadership emergence in negative e-WOM dissemination. To address the research questions, the opinion leader was firstly identified from the online community by measuring the contribution of each online member in seven degrees, and by analysing the social interaction among these members. In order to explore the dynamics of negative e-WOM dissemination, the whole discussion trend line was divided into four phases. The thematic analysis method was applied to analyse the dynamics of leadership establishment and its impact on negative e-WOM dissemination.

To address research question one, the results of the thematic analysis suggested four phases to establish the opinion leadership. These are the main activities for opinion leadership establishment. The main activities include posting their own opinion, responding to other members' questions, defending againsts, providing and analysing evidence, and reporting the

news. Through these activities, the opinion leader gradually established leadership. To further address research question two, the thematic analysis went through the four phases and identified the main roles that emerged through opinion leader activities. The main roles an opinion leader takes in the discussion are opinion presenter, helper, opinion defender, evidence provider and analyst. The role-taking changes through four phases indicated that the opinion leader was shifting the weight of taking different roles according to the discussion context changes to establish their leading position. The discussion for research question three discovered the inner links between the opinion leader's different role taking during the negative e-WOM dissemination.

As discussed above, the results from this chapter have addressed three research questions. The following chapter will discuss the implications of the results to further answer the fourth research question.

## **Chapter Five: Discussion and Implications**

### **5.1 Introduction**

This chapter will discuss the results presented in Chapter Four and the study implications. Firstly, the convergence and divergence of current study findings will be discussed. Theoretical and managerial implications of the study will be provided in the following section. Finally, limitations of the study will be reviewed and a suggestion for future research directions will be made.

### **5.2 The convergence and divergence of current study findings**

#### **5.2.1 The power of online opinion leader in the e-WOM dissemination**

The aim of this study is to explore the emergence and evolution of opinion leadership in an online community. The results from this study are consistent with past research which recognizes opinion leaders as influential figures to assist marketers in influencing negative e-WOM dissemination in online communities. In addition, this study emphasises that the true online opinion leader can have the influential power of changing community discussion development direction, and eventually eliminate negative e-WOM within the online community. Thus, this finding provides a new understanding of the opinion leaders' influence in the negative e-WOM discussion.

#### **5.2.2 Online opinion leader's characteristics**

Current research results also confirmed some online opinion leaders' characteristics that identified in the past research. Additionally, the finding discovers another two significant characteristics of online opinion leaders. They are: mastery of the media coverage about the discussion topic and high ability to access and select information across multimedia channels. These two characteristics can be used as new criteria to distinguish online opinion leaders from other community members in future research.

### **5.2.3 Online opinion leader's roles in negative e-WOM dissemination**

Current study finding provides further support to past research on social relationship behaviour analysis in online community structures (Huffaker, 2010), which reinforces the idea that opinion leaders take central position in the community and take a central role to connect with other online consumers to influence group discussion activities and the e-WOM spreading process.

The findings further illustrate the specific roles that the opinion leader performs at each discussion stage. The results identify the eight main roles of online opinion leaders in negative e-WOM dissemination context. These roles and the associated behaviour of the opinion leader have influences on negative e-WOM dissemination. Among these roles, consumer helper, opinion presenter and information reporter have been addressed in different e-WOM discussion contexts in the past research. But current results add more specific meaning to these roles in the negative e-WOM interaction. For example, past research stated that opinion leaders play an important role in assisting online consumers to make purchase decisions on innovative products by providing useful information (Hsu, Lin & Chiang, 2013). The findings from the current study strengthen the role of the opinion leader as a helper and assistant for other online consumers in confusing circumstances, to help consumers have assurance in making a purchase decision and to rebuild the confidence in the brand.

Furthermore, the current findings discover some new roles for online opinion leadership, such as evidence provider, evidence analyst and brand guardian. These new roles are crucial for an opinion leader to gain a leading position in an online community in order to influence negative e-WOM dissemination.

More importantly, the results of this study disclose that an online opinion leader perform different roles in negative e-WOM dissemination process. This finding reveals a



specific sequence for opinion leader role-taking in the process of leadership establishment. It shows that opinion leaders take multiple roles in different stages, and they shift the role-taking focus according to the negative discussion context changes and the expectations of online members. These results indicate that the opinion leader's role evolution is a dynamic process which follows the e-WOM discussion spreading development.

#### **5.2.4 Best time of intervening the negative e-WOM dissemination**

To the best of our knowledge, there is no empirical findings in past research clearly identifies the best time for an opinion leader to intervene in the negative e-WOM dissemination process. However, the findings from this study suggest the right time for intervention. They also reveal a proper sequence of different roles for the opinion leader to gain the leadership position at different discussion stages. The time identification from this study is an addition to past research, as it adds a new understanding of online opinion leadership and its impact on negative e-WOM dissemination.

### **5.3 RQ4: Research contributions and implications**

The current research integrated role theory into the study to focus on the dynamics of an opinion leader's behaviour analysis. The research formed a new research angle to analyse the opinion leader's behaviour and role adoption evolution in a specific negative e-WOM context in order to discover the opinion leader's influence on negative e-WOM dissemination. The results discovered a clear trace of opinion leadership establishment in an online discussion forum. This contribution has significant theoretical and marketing implications for researchers and practitioners.

### **5.3.1 Theoretical implications**

One of the most important theoretical contributions of the current study is that the results confirm that an online opinion leader's influential power can change community discussion development and can eventually eliminate negative e-WOM within the online community. This finding enriches the understanding of online opinion leader's influence and the relationship between the online opinion leadership establishment and e-WOM dissemination process.

Another contribution is that the study extends the theoretical understanding of the dynamics of an online opinion leader's activities and role adoption evolution in a specific negative e-WOM context, which has been neglected in past research. Although some research has suggested that the process of opinion leader emergence might be an ongoing developmental process, its dynamics have not been thoroughly studied in past research. The results from this study illustrate a clear dynamic process of opinion leader role taking in four discussion phases. Specifically, the results showed a leadership role-taking sequence tabulation to portray a timetable for an opinion leader to gain an influential position gradually according to the discussion volume changes. This finding can provide the initial foundation towards a solid conceptual framework to guide future research in the domain of understanding the leadership emergence process in e-WOM dissemination.

Furthermore, past studies of e-WOM and online opinion leaders have not pointed to an explicit understanding of the time identification for leadership establishment. This study shed light on the time of intervening in an e-WOM discussion, and provides an opportunity for researchers to consider timing as one of most important factors involved in leadership establishment in online discussion community studies. The findings of the current study provide an initial reference for further study in time consideration of the topic.

Current study results also discover some online opinion leader's roles that have not been paid attention to in past research. They also indicate that opinion leader's role shifting behaviour influences e-WOM discussion development. These findings reveal the process of an opinion leader influencing online consumer negative e-WOM adoption through information exchange and provide a rich understanding of online opinion leader behaviour in discussion communities.

### **5.3.2 Practical implications**

The findings suggest that an opinion leader is a special force for marketers to target in order to help businesses prevent negative e-WOM spread. The results also have significant implications for marketers to control negative e-WOM dissemination by influencing opinion leader activities and role changing.

#### **5.3.2.1 The reach of negative e-WOM dissemination**

The findings of the research indicate a special consideration concerning the timeframe for an opinion leader to successfully gain a leadership position through a negative e-WOM discussion in a self-organised online discussion community. This frame can help marketers to monitor the discussion volume changes, predict the negative e-WOM spreading scale, and evaluate the potential discussion development in the online community. More specifically, marketers can identify the opinion leaders through the discussion context to forecast their potential activities and influences to make a strategic decision on whether to intervene in the discussion.

Furthermore, the results draw a picture of opinion leadership establishment which can assist marketers in getting an idea of how to effectively gain control of negative e-WOM dissemination in a self-organised online community. For example, in the early stage of the e-

WOM discussion, marketers can address specific individuals to help them gradually gain a leadership position, and to become potential business guardians who will help the business control the e-WOM dissemination and eventually eliminate the negative e-WOM about the product and business. In a later discussion phase, if the negative e-WOM spreading has been controlled by the opinion leader, marketers can provide extra access for positive information related to products in order to increase the targeted opinion leader's discussion credibility. This will further help to retain their opinion leading position against the negative e-WOM opinion, and then assist the business with preventing further negative e-WOM spreading. However, at this stage, if the negative e-WOM spreading is getting faster and the negative opinion is still dominating the discussion context, the marketer can increase the availability of relevant knowledge, compelling resources or relevant media reports to more online consumers to challenge the negative opinion leader's credibility and gain an opportunity to convince more online consumers. Therefore, the results from this study not only provide meaning for marketers to develop their own opinion leader, but also to prevent negative opinion leadership development.

#### **5.4 Summary**

This chapter discussed the convergence and divergence of the study results, referring back to the literature review in Chapter Two. The results supported the past research findings of opinion leader influence on e-WOM spreading. An important contribution of this study is discovering the dynamics of leadership establishment and their impact on negative e-WOM dissemination. The results provide a deeper understanding of the leadership emergence process. They indicate a chance for marketers to intervene in negative e-WOM dissemination, and they help to identify the optimal time to intervene in the dissemination. The next chapter will highlight some research limitations and further research directions, followed by conclusions drawn from the study results.

## **Chapter Six: Conclusions**

### **6.1 Introduction**

This chapter will discuss the main conclusions drawn from the study results discussed in Chapter Five. The conclusions will focus on the main contribution of the study, the theoretical meaning of the results and the practical implications for marketers. The research limitations will follow to address the main concerns about the study and suggest future research directions.

### **6.2 Main conclusion**

Based on the discussion of the results, several conclusions can be drawn from the current study. It was concluded that this study achieved the primary goal of filling the research gap. Firstly, this study takes a step towards discovering the dynamics of online opinion leadership establishment. More specifically, a qualitative study was conducted to have a closer look at an individual opinion leader's activity and leading role-taking evolution according to the discussion development and the context changes. The thematic analysis drew a clear link between the opinion leader's role-taking behaviour and the negative e-WOM dissemination.

Building on the previous point, the study also offers a theoretical perspective on the field of e-WOM and opinion leader research. Past research has described opinion leaders' powerful influence on opinion adoption and e-WOM interaction. However, the current study considered the question of leadership establishment in an e-WOM discussion context with the purpose of identifying the opinion leader's influence on the e-WOM spreading process. This study serves to integrate and bind these concepts, and to create a useful foundation of dynamic study of e-WOM for further study and theoretical uses.

This study achieved another goal of revealing a practical chance for marketers to gain more control of negative e-WOM spreading in self-organised communities. The results not

only suggested strategies for intervening in negative e-WOM spreading, but also suggested a time consideration in intervening in the e-WOM spread. Furthermore, identifying the right time to influence the e-WOM involved many factors. The current research pointed out two of the most important factors as being the discussion volume change and the community expectations. This contribution can be a catalyst for further research on expectation management within an e-WOM spreading context.

### **6.3 Limitations**

There are several limitations to this research.

First, the dataset is about Apple products. The existing brand equity creates influences on the discussion involvement and the opinion adoption behaviour. The number of loyal consumers to the brand could influence the negative e-WOM spreading process. However, this study did not include these considerations. As is known, different brands may have different brand equity, which influences consumers' perceptions of a product's quality and perceived purchase risks. These influences may affect online consumers' discussion topics and opinion adoption behaviour. Therefore, the results from this study may not be able to be fully applied to all other online brand communities.

Furthermore, the online consumers in the study were from different countries, meaning that it is hard to check the background information of each member. Some members might be competitor brand supporters who could potentially affect the data and affect the negative e-WOM influences, but this study did not include a consideration of these influences. The current study instead focused on the opinion leader's behaviour in the community and the negative e-WOM was eliminated at the end of the thread. This means that the effects from those influences would not have been strong enough to change the final results.

In addition, only one discussion thread about the discussion topic was retrieved from an online discussion forum in the current study. The findings would only reflect the opinion

leader's behaviour in a similar discussion context, but may not fully represent situations in other forms of online communities. This limits the generalisability of the study results. A further similar study should consider other forms of online communities or should target more discussion threads that cover more discussion topics to test the reliability of the results.

Lastly, trolling has been identified by the community members and mentioned in the discussion posts. However, research found that online community members usually regulate a troll's behaviour by ignoring or blocking their messages from the discussion context (Herring, Job-Sluder, Scheckler & Barab, 2002; Huffaker, 2010). Thus, trolls normally could not stay in the community for a long enough time to cause discussion diffusion. However, future research could consider identifying and removing trolls from the dataset to get more accurate results.

#### **6.4 Future research directions**

First of all, the results of the current study provide a deeper insight into opinion leadership establishment in an online context. The results provide a good foundation for a potential framework development on opinion leadership establishment. Therefore, future studies could be based on the current results and could focus on developing a solid conceptual framework for leadership establishment. Furthermore, the data in the current study showed how an opinion leader helped a company to eliminate the negative e-WOM discussion. Future research could select a database to show the case of how an opinion leader changes a negative e-WOM discussion to positive e-WOM for a business to integrate with the current results and formalise a theoretical framework.

The current study suggests a broad strategy for intervening in the negative e-WOM spreading process, but there is a need for a detailed and clear strategic plan for marketers. Future research could focus on the opinion leadership establishment process to provide feasible

strategies that help marketers to effectively intervene in the negative e-WOM discussion and to gain control of the dissemination.

Lastly, the results showed that online members' expectations can influence an opinion leader's role taking and evolution, and this study provided a rich discussion about this factor. The expectations of management may be another important factor that is involved in the leadership establishment process. Further studies can address how online consumer expectations change during the online discussion process and their impact on leadership establishment. In addition, the expectations are highly related to identifying the time for intervening in the negative e-WOM spreading process. Therefore, research on expectation changes is needed to further consolidate the findings from current study.

## **6.5 Summary**

This study integrates the opinion leadership establishment process with the negative e-WOM spreading process through the analysis of opinion leader role-taking and evolution behaviours to provide a rich understanding of the opinion leader's behaviour in an online setting. To investigate how the opinion leader's role taking and evolution influence the negative e-WOM dissemination, a qualitative thematic analysis research method was employed to analyse a set of primary data derived from an online discussion forum. The results drew a dynamic picture of leadership establishment in the negative e-WOM spreading process. It can benefit researchers in further understanding the e-WOM spreading process, opinion leader establishment process and opinion leaders' dynamic activities in these processes. The discussion adds to the literature by extending a deeper understanding of the phenomenon of an opinion leader's influence on negative e-WOM dissemination in detail.



The study results provide marketers with a chance to manage negative e-WOM spread in self-organised communities. Future studies of the dynamics of e-WOM dissemination will enrich the understanding of the concepts.

## References

- Abrantes, J. L., Seabra, C., Lages, C. R., & Jayawardhena, C. (2013). Drivers of in-group and out-of-group electronic word-of-mouth (eWOM). *European Journal of Marketing*, 47 (7), 1067 – 1088.
- Ahrens, J., Coyle, J. R., & Strahilevitz, M. A. (2013). Electronic word of mouth: The effects of incentives on e-referrals by senders and receivers. *European Journal of Marketing*, 47 (7), 1034 – 1051.
- Alexandrov, A., Lilly, B., & Babakus, E. (2013). The effects of social- and self-motives on the intentions to share positive and negative word of mouth. *Journal of the Academy of Marketing Science*, 41(5), 531-546.
- Andreassen, T. W., & Streukens, S. (2009). Service innovation and electronic word-of-mouth: is it worth listening to? *Managing Service Quality*, 19 (3), 249-265.
- Armstrong, A., & Hagel, J., III. (1996). The real value of on-line communities. *Harvard Business Review*, 74(5), 134–141.
- Attride-Stirling, J. (2001). Thematic networks: An analytic tool for qualitative research. *Qualitative Research*, 1(3), 383-405.
- Awad, N., & Ragowsky, A. (2008). Establishing trust in electronic commerce through online word of mouth: An examination across genders. *Journal of Management Information Systems*, 24 (4), 101 – 121.
- Bagozzi, R., & Dholakia, U. M. (2002). Intentional social action in virtual communities. *Journal of Interactive Marketing*, 16 (2), 2–21.
- Balasubramanian, S., & Mahajan, V. (2001). The economic leverage of the virtual community. *International Journal of Electronic Commerce*, 5(3), 103 – 38.
- Berg, B. L. (2004). *Qualitative research method* (5<sup>th</sup> ed.). Boston: Allyn & Bacon
- Biddel, B. J. (1986). Recent developments in role theory. *Annual Review of Sociology*, 12, 67-92.

- Bodendorf, F., & Kaiser, C. (2009, November). Detecting opinion leaders and trends in online social networks. In Proceedings of the 2nd ACM workshop on Social web search and mining (pp. 65-68). ACM.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Broderick, A. J. (1998). Role theory role management and service performance. *Journal of Service Marketing*, 12 (5), 348-361
- Bronner, F., & Hoog, R. (2010). Consumer-generated versus marketer-generated website in consumer decision making. *International Journal of Market research*, 52(2), 231-248
- Brown, J., Broderick, A. J., & Lee, N. (2007). Word-of-Mouth communication within online communities: Conceptualizing the online social network. *Journal of Interactive Marketing*, 21(3), 2-20.
- Butler, B. S. (2001). Membership size: Communication activity, and sustainability: A resource-based model of online social structures. *Information Systems Research*, 12(4), 346-362.
- Chatterjee, P. (2001). Online reviews: Do consumers use them? *Advances in Consumer Research*, 28, 129-133
- Chen, Y., & Xie, J. (2008). Online consumer review: word-of-mouth as a new element of marketing communication mix. *Management Science*, 54 (3), 477-491.
- Cheng, S., Lam, T., & Hsu, C. H. C. (2006). Negative word-of-mouth communication intention: An application of the theory of planned behavior. *Journal of Hospitality & Tourism Research*, 30 (1), 95-116.
- Cheung, C. M. K., Lee, M. K. O., & Rabjohn, N. (2008). The impact of electronic word-of-mouth. *Internet Research*, 18 (3), 229-247.
- Cheung, C. M. K., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. *Decision Support Systems* 54 (1), 461-470.
- Cheung, M. Y., Luo, C., Choon, L. S. & Chen, H. (2009). Credibility of electronic word-of-mouth: informational and normative determinants of on-line consumer recommendations. *International Journal of Electronic Commerce*, 13(4), 9-38.

- Christodoulides, G., Michaelidou, N., & Argyriou, E. (2012). Cross-national differences in e-WOM influence. *European Journal of Marketing*, 46 (11/12), 1689-1707.
- Clark, R. A. & Goldsmith, R. E. (2005). Market mavens: psychological influences. *Psychology & Marketing*, 22 (4), 289-312.
- Dahlander, L., & Frederiksen, L. (2012). The core and cosmopolitans: A relational view of innovation in user communities. *Organization Science*, 23(4), 988–1007
- Dellarocas, C. (2003). The digitization of word-of-mouth: promise and challenges of online feedback mechanisms. *Management Science*, 49, 1407–1424.
- Dellarocas, C. (2006). Strategic manipulation of internet opinion forums: Implications for consumers and firms. *Management Science*, 52 (10), 1577-1593.
- Dennis, C., Merrilees, B., Jayawardhena, C., & Wright, L.T. (2009) E-consumer behaviour. *European Journal of Marketing*, 43, (9/10), 1121–1139.
- East, R., Hammond, K., & Lomax, W. (2008). Measuring the impact of positive and negative word of mouth on brand purchase probability. *International Journal of Research in Marketing*, 25(3), 215-224.
- Eck, P. S., Jager, W., & Leeflang, P. S. H. (2011). Opinion leaders' role in innovation diffusion: a simulation study. *The Journal of Product Innovation Management*, 28(2), 187-203.
- Faraj, S., & Johnson, S. L. (2011). Network exchange patterns in online communities. *Organisation Science*, 22(6), 1464–1480.
- Flynn, L. R., Goldsmith, R. E., & Eastman, J. K. (1996). Opinion leaders and opinion seekers: Two new measurement scales. *Journal of the Academy of Marketing Science*, 24, 137–147.
- Forman, C., Ghose, A., & Wiesenfeld, B. (2008). Examining the relationship between reviews and sales: The Role of reviewer identity. *Information Systems Research*, 19 (3), 69-82.
- Füller, J., Mühlbacher, H., Matzler, K., & Jawecki, G. (2009). Consumer empowerment through Internet-based co-creation. *Journal of Management Information Systems*, 26(3), 71-102.
- Gnambs, T., & Batinić, B. (2013). The roots of interpersonal influence: A mediated moderation model for knowledge and traits as predictors of opinion leadership. *Applied Psychology*, 62(4), 597-618.

- Godes, D., & Mayzlin, D. (2009). Firm-created word-of-mouth communication: Evidence from a field test. *Marketing Science*, 28(4), 721-739.
- Goldsmith, R. E., & Horowitz, D. (2006). Measuring motivations for online opinion seeking. *Journal of Interactive Advertising*, 6(2), 3-14.
- Gruen, T. W., Osmonbekov, T., & Czaplewski, A. J. (2006). E-WOM, the impact of customer-to-customer online know-how exchange on customer value and loyalty. *Journal of Business Research*, 59, 449-456
- Gu, B., Konana, P., Rajagopalan, B., & Chen, H. W. M. (2007). Competition among virtual communities and user valuation: the case of investing-related communities. *Information Systems Research*, 18(1), 68-85.
- Gupta, P. & Harris, J. (2010). How e-WOM recommendations influence product consideration and quality of choice: A motivation to process information perspective. *Journal of Business Research*, 63, 1041-49.
- Ha, H. Y., & Perks, H. (2005). Effects of consumer perceptions of brand experience on the web: brand familiarity, satisfaction and brand trust. *Journal of Consumer Behaviour*, 4(6), 438-452.
- Hardey, M. (2011). Generation C: Content, creation, connections and choice. *International Journal of Market Research*, 53(6).
- Hennig-Thurau, T., & Walsh, G. (2003). Electronic word-of-mouth: motives for and consequences of reading customer articulations on the internet. *International Journal of Electronic Commerce*, 8 (2), 51 – 74.
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the Internet? *Journal of Interactive Marketing*, 18, 38–52.
- Herring, S., Job-Sluder, K., Scheckler, R., & Barab, S. (2002). Searching for safety online: managing “trolling “ in a feminist forum. *Information Society*, 18,371-384
- Hesse-Biber, S. N., & Leavy, P. (2011). *The practice of qualitative research* (2nd ed.). Thousand Oak, CA: Sage

- Hickman, T. M., & Ward, J. C. (2013). Implications of brand communities for rival brands: negative brand ratings, negative stereotyping of their consumers and negative word-of-mouth. *The journal of brand management*, 20(6), 501-517.
- Hoch, J. E., & Kozlowski, S.W. J. (2014). Leading virtual teams: Hierarchical leadership, structural supports, and shared team leadership. *Journal of Applied Psychology*, 99 (3), 390–403.
- Hsu, C. L., Lin, J. C., & Chiang, H. S. (2013). The effects of blogger recommendations on customers' online shopping intentions. *Internet Research*, 23(1), 69-88.
- Huang, M., Cai, F., Tsang, A. S. L., & Zhou, N. (2011). Making your online voice loud: the critical role of WOM information. *European Journal of Marketing*, 45(7/8), 1277-1297.
- Hudson, S., Roth, M. S., Madden, T. J., & Hudson, R. A. (2015). The effects of social media on emotions, brand relationship quality, and behavior: An empirical study of music festival attendees. *Tourism Management*, 47, 68-76.
- Huffaker, D. (2010). Dimensions of leadership and social influence in online communities. *Human Communication Research*, 36(4), 593–617.
- Hunt, S. D., Arnett, D. B., & Madhavaram, S. (2006). The explanatory foundations of relationship marketing theory. *Journal of Business and Industrial Marketing*, 21(2), 72-87.
- Jayawardhena, C., & Wright, L. T. (2009). An empirical investigation into e-shopping excitement: antecedents and effects. *European Journal of Marketing*, 43 (9-10), 1171-1187.
- Joffe, H., & Yardley, L. (2003). Content and thematic analysis. In D. F. Marks & L. Yardley (Eds.), *Research Methods for Clinical and Health Psychology*. Cornwall, Great Britain: TJ International.
- Johnson, S. L., Safadi, H., & Faraj, S. (2015). The Emergence of Online Community Leadership. *Information Systems Research*, 26(1).165-187.
- Kaiser, C., & Bodendorf, F. (2012). Mining consumer dialog in online forums. *Internet Research*, 22(3), 275-297.
- Kalyanam, K., & McIntyre, S. (2002). The e-marketing mix: a contribution of the e-tailing wars. *Journal of Academy of Marketing Science*, 30 (4), 487-499.

- Kankanhalli, A., Tan, B. C. Y., & Kwok-Kee, W. (2005) Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quart*, 29(1), 113–143.
- Lee, C. H., & Cranage, D. A. (2014). Toward understanding consumer processing of negative online word-of-mouth communication: the roles of opinion consensus and organizational response strategies. *Journal of Hospitality & Tourism Research*, 38(3), 330-360.
- Lee, J-M., & Lee, J. (2009). Understanding the product information inference process in electronic word-of-mouth: an objectivity-subjectivity dichotomy perspective. *Information & management*, 46 (5), 302 – 311.
- Lee, M., & Youn, S. (2009). Electronic word of mouth (eWOM): How e-WOM platforms influence consumer product judgement. *International Journal of Advertising*, 28(3), 473–499
- Lee, S., Noh, S., & Kim, H. (2013). A mixed methods approach to electronic word-of-mouth in the open-market context. *International Journal of Information Management*, 33( 4), 687-696.
- Li, F., & Du, T. C. (2011). Who is talking? An ontology-based opinion leader identification framework for word-of-mouth marketing in online social blogs. *Decision Support Systems*, 51(1), 190-197.
- Liang, S. W., Ekinci, Y., Occhiocupo, N., & Whyatt, G. (2013). Antecedents of travellers' electronic word-of-mouth communication. *Journal of Marketing Management*, 29(5-6), 584-606.
- Lyons, B., & Henderson, K. (2005). Opinion leadership in a computer-mediated environment. *Journal of Consumer Behaviour*, 4(5), 319-329.
- Matthew, C. N., & John, E. K. (2009). A two-step flow of influence? Opinion-leader campaigns on climate Change. *Science Communication*, 30(3), 328-354.
- Mayzlin, D. (2006). Promotional chat on the internet. *Marketing Science*, 25(2), 155-163.
- McWilliams, G. (2000). Building strong brands through online communities. *MIT Sloan Management Review*, 41(3), 43–54.
- Me, N. (2003). The structure and function of complex networks. *SIAM Review*, 45(2), 167–256.
- Merlo, O., Eisingerich, A. B., & Auh, S. (2014). Why Customer Participation Matters. *MIT Sloan Management Review*, 55 (2), 81-88.
- Minster, I. R. (1999).The world's best known marketing secret. in *Building you business with word-of-mouth marketing* (2<sup>nd</sup>). Austin, TX: Bard Press

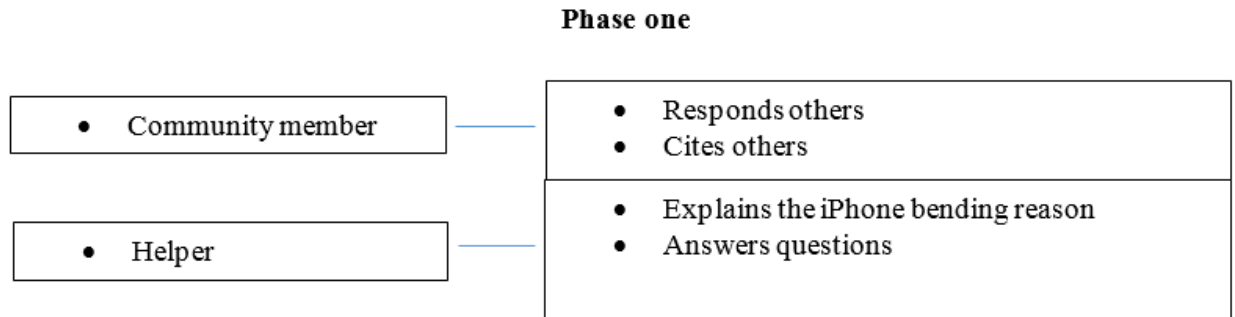
- Ma, N., Liu, Y., Tian, R., & Li, Q. (2012). Recognition of online opinion leaders based on social network analysis. In *Active Media Technology* (pp. 483-492). Springer Berlin Heidelberg.
- Noone, B. M. (2012). Overcompensating for severe service failure: perceived fairness and effect on negative word-of-mouth intent. *The journal of services marketing*, 26(5), 342-351.
- Ren, Y., Harper, F. M., Drenner, S., Terveen, L., Kiesler, S., Riedl, J., & Kraut, R. E. (2012). Building member attachment in online communities: Applying theories of group identity and interpersonal bonds. *MIS Quart*, 36(3), 841-864.
- Riegner, C. (2007). Word of mouth on the web: The impact of Web 2.0 on consumer purchase decisions. *Journal of Advertising Research*, 47(4), 436-447.
- Rogers, E.M. (1995). *Diffusion of innovations* (4th ed.). NY: The Free Press.
- Sen, S., & Lerman, D. (2007). Why are you telling me this? An examination in to negative consumer reviews on the web. *Journal of Interactive Marketing*, 21(4), 76-94.
- Senecal, S., & Nantel, J. (2004). The influence of online product recommendations on consumers' online choices. *Journal of Retailing*, 80(2), 159-169.
- Shoham, A., & Ruvio, A. (2008). Opinion leaders and followers: a replication and extension. *Psychology and Marketing*, 25 (3), 280-297.
- Stauss, B. (1997). Global Word of Mouth. Service Bashing on the Internet is a Thorny Issue. *Marketing Management*, 6(3), 28-30.
- Stewart, T. (2010). Online communities. *Behaviour & Information Technology*, 29 (6), 555-556.
- Sun, T., Youn, S., Wu, G., & Kuntaraporn, M. (2006). Online word-of-mouth (or mouse): An exploration of its antecedents and consequences. *Journal of Computer-Mediated Communication*, 11(4), 1104-1127.
- Van den Brink, R., & Rusinowska, A. (2013). Measuring power and satisfaction in societies with opinion leaders: an axiomatization. *Social Choice and Welfare*, 41(3), 671-683.
- Venkatraman, M. P. (1989). Opinion leaders, adopters, and communicative adopters: a role analysis. *Psychology and Marketing*, 6 (1), 51-55.
- Verona, G., Prandelli, E., & Sawhney, M. (2006). Innovation and virtual environments: towards virtual knowledge brokers. *Organization Studies*, 27 (6), 765-788.



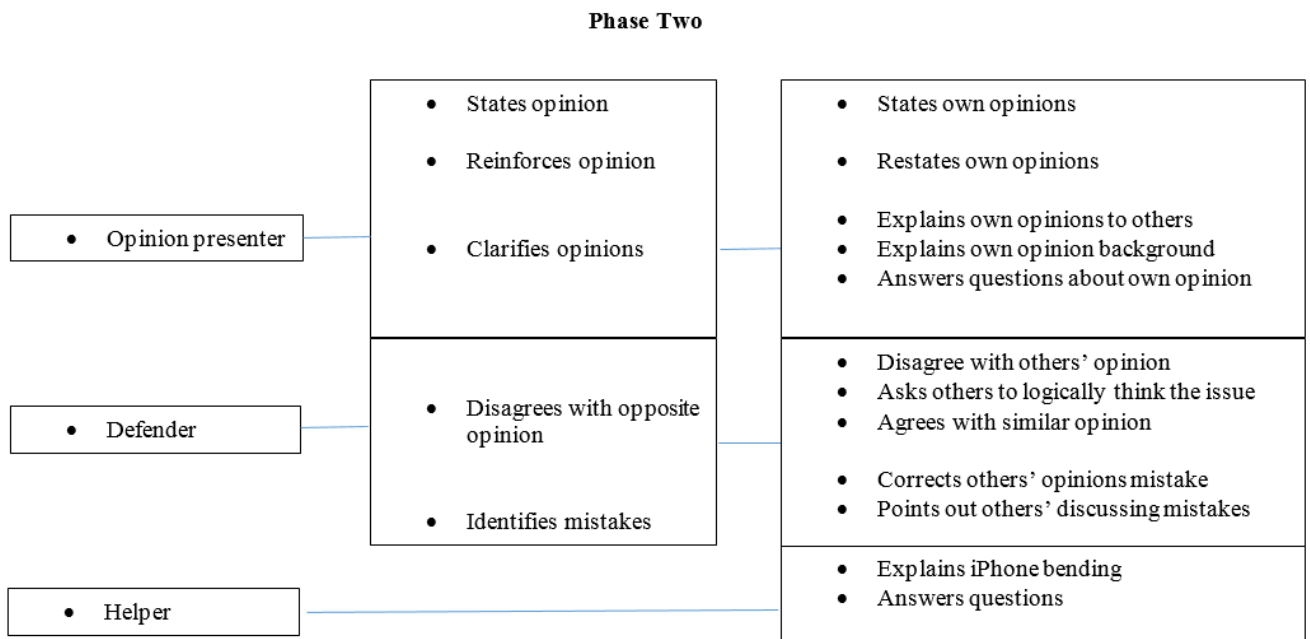
- Wang, N., Shen, X., & Sun, Y. (2013). Transition of electronic word-of-mouth services from web to mobile context: A trust transfer perspective. *Decision Support Systems*, 54(3), 1394-1403.
- Wasko, M. M., & Faraj, S. (2005). Why should I Share? Examining Social Capital and Knowledge Contribution in Electronic Networks of Practice. *MIS Quarterly*, 29 (1), pp. 35-57.
- Wasko, M. M. L., Teigland, R., & Faraj, S. (2009). The provision of online public goods: Examining social structure in an electronic network of practice. *Decision Support Systems* 47(3), 254–265.
- Wellman, B. (2001). Computer Networks as Social Networks. *Science*, 293 (14), 2031-2034.
- Williams, M., & Buttle, F. (2014). Managing negative word-of-mouth: an exploratory study. *Journal of marketing management*, 30 (13/14), 1423-1447.
- Yoon, S. (2012). A social network approach to the influences of shopping experiences on e-wom. *Journal of Electronic Commerce Research*, 13(3), 213-223.
- Zeelenberg, M., Wetzer, I. M., & Pieters, R. (2007). "Never eat in that restaurant, I did!" Exploring why people engage in negative word-of-mouth communication. *Psychology & Marketing*, 24(8), 661-680.
- Zhang, J. Q., Craciun, G., & Shin, D. (2010). When does electronic word-of-mouth matter? A study of consumer product reviews. *Journal of Business Research*, 63 (12), 1336-1341.
- Zhang, W., Li, X., He, H., & Wang, X. (2014). Identifying network public opinion leaders based on markov logic networks. *The Scientific World Journal*, 2014, 1-8.
- Zhang, X., & Dong, D. (2008). Ways of identifying the opinion leaders in virtual communities. *International Journal of Business and Management*, 3(7), 21-24

## Appendices:

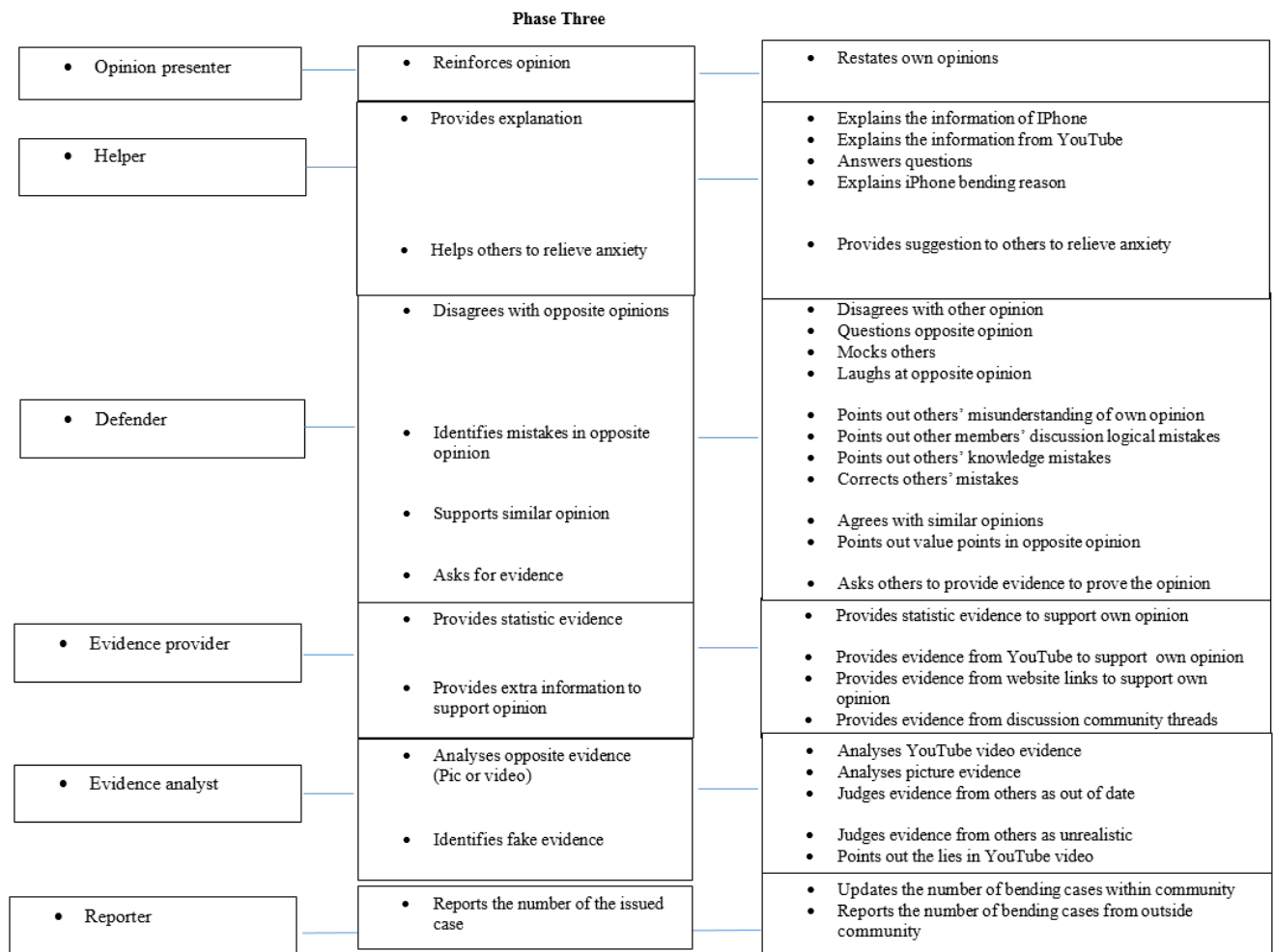
### Appendix 1- Thematic Map Phase One



### Appendix 2- Thematic Map Phase Two



## Appendix 3- Thematic Map Phase Three



## Appendix 4- Thematic Map Phase Four

### Phase Four

