

## Social Media: How it ensures Effective Communication among Project Team's

KAMALRUFADILLAH SUTLING<sup>1</sup>, ZULKEFLI MANSOR<sup>2</sup>, SETYAWAN WIDYARTO<sup>3</sup>,  
SUKUMAR LECTHMUNAN<sup>4</sup>, NOOR HABIBAH ARSHAD<sup>5</sup>

<sup>13</sup>Faculty of Computer Science and Information Technology, Universiti Selangor,  
45600 Bestari Jaya, Selangor Darul Ehsan, Malaysia.

<sup>2</sup>Faculty of Information Science and Technology, Universiti Kebangsaan Malaysia,  
43600 UKM Bangi, Selangor Darul Ehsan, Malaysia.

<sup>4</sup>School of Computer Sciences, Universiti Sains Malaysia,  
11800 Minden, Pulau Pinang, Malaysia.

<sup>5</sup>Faculty of Computer and Mathematical Science, Universiti Teknologi Mara,  
40450 Shah Alam, Selangor Darul Ehsan, Malaysia.

<sup>1</sup>kamaldillah@unisel.edu.my, <sup>2</sup>kefflee@ukm.edu.my, <sup>3</sup>swidyarto@unisel.edu.my,  
<sup>4</sup>sukumar@cs.usm.my, <sup>5</sup>habibah@tmsk.uitm.edu.my

*Abstract:* - Project team is usually entrusted with a vital role in producing quality products and improving the productivity of an organization. Furthermore, communication is the main element in organizing a project. Without an effective communication tools, obstructions will occur hence preventing the project team in communication. Thus, Social media stands out as an important element in today's communication industry. In Malaysia, there are lack of research done to addresses how social media effectively helps project teams especially when it comes to communication. Realizing the lack of research on the effectiveness of social media in communication among project team, this research took steps to addressing how social media helps project team to ensure effective communication. Thus, this paper has identified 4 effective social media to project team communication such as Facebook, Google+, Microsoft Lync and WhatsApp. Effective social media will lead to better outcomes and, therefore, a higher likelihood for overall project success.

*Key-Words:* - Communication · Project Team · Social Media · Facebook · Google+ · Microsoft Lync  
· Whatsapp

### 1 Introduction

Social media stands out as an important element in today's communication industry [1][2]. Social media is a medium to share content, profile, opinion, problems, experience, perspective and media itself and is always used personally, in organizations, community[2][3].

It is also facilitating the communication just in time [4]. With the thriving of social media around the world, internet users in Malaysia too are influenced by this effect. According to a research (www.internetworldstats.com) almost 20 million Malaysians are internet users in the year 2013 and Facebook is the most popular social media at Malaysia with almost 14 million users.

Furthermore, many organizations in the world had already used social media for internal communication and had impact their business [5]. Nevertheless, in an organization, project managers play an important role in adapting these social medias into their projects to ensure continuous

cooperation's and communication among the team members [2].

In general, many research focuses on literature analysis about social media in marketing industry [6], management [5] education [7] the public [8]and also individual[1]. However, there were lack related researches done to identify how social media helps project team to ensure effective communication. Realizing the lack of research that addresses how social media helps project teams especially when it comes to communication, this research took steps to address how social media helps project team to ensure effective communication.

### 2 Literature Review

This section focuses on the previous works related to the research such as project team communication and effective social media for project team communication.

## 2.1 Project Teams Communication

Project team is usually entrusted with a vital role in producing quality products and providing creative ideas for improving the productivity of an organization, [9], [10]. However, when the project team decided to work as a team, normally conflicts will arise. Conflict usually arises when; team members are not on board with the current objective, different opinions on the prioritizations and the schedule of the objectives, and also due to the locations of the team members [11][12]. In coping with this problem, communication is the main element to assist organizations undergoing change by breaking down the resistance among workers, increasing their trust and resolving conflicts [13]. Thus, the project team needs to make all kinds of communication every day such as informal and formal communication through face-to-face; telephone; Meeting and e-mail communication [11][14]. Furthermore, project team also requires the quick feedback[15].

However, without an effective communication tools, obstructions will occur hence preventing the project team in making decisions, delay on feedbacks, and lack of reciprocity [4]. Moreover, the project team will face communication barriers to share experiences and information with other team members [16]. Furthermore, lead to communication barriers or conversations that damage the characteristics of fraud, deceit, manipulation and coercion, may cause anger, frustration, internal exile or demotivation [17]. In addition, lacking of facilities like large workspaces, meeting rooms, silent rooms etc. also can decrease the team's interaction communication opportunities and get them distracted while working [18].

However, effective communication tool will lead to better outcomes and, therefore, a higher likelihood for overall project success due to when the project team has the technology to communicate, share data, information and knowledge effectively, then it will be a much faster decision-making and problem-solving work and any issues that were not in the plan that may occur [19]. Furthermore, the recent development of communication technologies such as social media has led to explorations of how these technologies contribute and impact distributed work practices [4]. Therefore, further research is important to see how social media ensure effective communication among project team.

## 2.2 Effective Social Media for Project Team Communication.

Social media is one of those platforms where communication, innovation and best practices for

sharing and discussing information[6][20]. It also can be described as a kind of online media which encourages every people to share the content, profile, opinion, problems, experience, perspective and media itself [2][3]. Furthermore, Social media refers to the use of web-based and mobile technologies to turn communication into an interactive dialogue[21].

Thus, Social media are affecting the way project team communicate, develop relationships and build trust in work settings [5] [15] [9]. Furthermore, according to [19] Social media also allows detecting changes in communication over time, which might be an early warning indicator for latent problems in a project e.g. a problem detected during integration test, resulting intensive communication between the involved teams. Therefore, through social media, project team can contribute to the organization through new ideas, better work methods and cost reduction in organization[17].

In general, many social media such as Twitter, Orkut, Myspace, Instagram, Linkedin and etc, are used widely in communication. However, these social media are only utilized in promoting products, official, education, personal and for candidate searches[22][23].Furthermore, new media such as Facebook, Skype G + and Dropbox have such elements that encourage the team to remain online facilitate communication timely [4]. In addition, Google+, Microsoft Lync, GoToMeeting and Webex are also used extensively for the purpose of communication in project team because these social media are very cost-effective compared to traditional approaches such as email and traditional meetings[24][25][26].

However, this research examines four social media that can help the project team to ensure effective communication. Furthermore, this research uses four of the most popular social media platforms to project team effective communications that act as an actual communications platforms use on project teams. Therefore, 4 effective of social media is as below:

### 2.2.1 Facebook

Facebook was built to help people around the world to communicate with one another. Furthermore, Facebook is the most popular social media in Malaysia with almost 14 million uses. In addition, Facebook is one alternative means for project team to be able to voice their thoughts in and outside of the organization because Facebook has offered many communication tools for project team to make communication more effective like creating groups, pages, social ads and Facebook Messenger

[27][28]. This study finds, Groups allow the project manager to create a place for project teams so that they can participate in the start discussions, share photos, video, links and any types of interaction on the Facebook.

Thus, this social media have a significant impact to project teams to communicate, share data, creating and maintaining the profile and establishing links with their other teams. Furthermore, the previous study [4] had also identified 30 classification of the interactions between team members when using Facebook as a means of effective communication in project teams such to share their task assignment, task schedule, task remainder, notice, task progress report request, reporting task progress, problem notification, solution proposal, information notification, acceptance, affirmation, negation, agreement, technical question, consultation, doubts, work authorization, decline authorization, advising request, giving advice, information request, document request, motivating members, meeting scheduling, providing guidance, making proposals and document uploads. Therefore, through these interactions, the project team can interact more frequently to make decisions and communication without waiting for traditional fixed meeting to change the conditions in the face [29].

However, according to opinion [30] the most of existing social media such as Facebook are designed to be bias towards information disclosure to a large audience. Therefore, this research looks at the suitability of these types of interactions to be used on other social media like Google+, Microsoft Lync and WhatsApp.

### 2.2.2 Google +

Google+ is a social media network owned by Google which focuses on information sharing through labelled groups of users [24]. Furthermore, Google+ is the second most popular social media in Malaysia after Facebook. This social media is very effective for project team to communicate quickly because that Google+ has added features such as Circles, Hangouts and Sparks and tight integration with all of Google's services such Gmail, Google Driver, Google Maps and etc.

However, when a project organization launch a new product, the project manager need to create a circle to all project team members involved so that all ideas, videos, pictures and link, will be on that Circles page, and everything will be documented [31]. Thus, the circle becomes the workspace and the tool of communication to project team[31].

Moreover, the Hangouts are the ideal alternative tools to video conferencing. It is also extremely useful to project team communication because it has high-quality voice at data rate of 40 kb/s [32]. In additional, Google Hangouts is also appropriate to be used for project team because the ability to integrate Google Docs, screen-sharing and a streamlined 'invitation to join' process. Additionally, a "hangout" can be saved to the YouTube platform for future referencing and even broadcast live [33].

### 2.2.3 Microsoft Lync

Microsoft Lync is the best social media and platform for project team to communicate because it provides online telemeeting capabilities such as video conferencing, audio calls, and desktop sharing among the project team [25]. Furthermore, Microsoft Lync is more cost effective compared to GoToMeeting and Webex [26]. According to an email sent by HP Packard Hewlett Malaysia as case study for this research, this company had utilized Microsoft Lync as an effective communication medium to their project team.

Thus, this research finds Microsoft Lync facilitates the project team communicate due to it currently merging has the Skype and Messenger social networks into their media [34]. Both the platforms support instant messaging, support voice chatting, both two-way and multi-person. Besides that, Lync Online enables project team to connect high quality video sessions resolutions up to HD 1080P standard H.264 SVC codec in two-party calls and multiparty conferences [25][34][35][36].

In addition, Lync 2013 also extends the power of Lync to mobile device such Windows Phone, iPhone, iPad, and Android for view shared meeting content during a conference, to communicate and collaborate ideas and initiate a group conversation (IM or video) or invite additional participants project, and transfer project team calls to another phone number or another team contact. Therefore, according to [26] "when the project teams is in separate countries, Microsoft Lync is beneficial to them as if it was a team project in the same room".

### 2.2.4 Whatsapp

WhatsApp is also suitable to be used by the project team communicates because it provides a free alternative for texting directly to the recipient's smartphone. At the fourth quarter 2014, (statista.com) has given an information on the percentage of mobile internet users in selected countries that are active WhatsApp users. Overall, South Africa was ranked first with a 78% WhatsApp

adoption rate and Malaysia was ranked second with a 75% percent WhatsApp adoption rate.

Furthermore, in spring 2014, Facebook announced their acquisition of the popular messaging platform. In addition, in an article taken from (Whatsapp.com): Whatsapp had launched the web and desktop pc version of Whatsapp for their users with the exceptions to the iOS users. However, this version of Whatsapp will only function with Google chrome only.

This social media makes one of the best platforms on project teams to communicate more effectively due to the fact that it is the most well-run instant messaging service available, handling more instant messages in a day than the entire global SMS industry [37]. Furthermore, Whatsapp is also set in a neat and user-friendly interface and one of the most well-designed and intuitive IM mobile apps. Therefore, Whatsapp allows the project team to send text messages, media files such as photos, videos, sound clips and it also allows the project team to sent links, contact vcards and location immediately [28][38]. Moreover, user phonebook contacts that have Whatsapp installed will be automatically added to Whatsapp contact list and allows the project team opens a chat with them or create a group chat.

### 3 Research Method

In this research, systematic literature analysis is used to collect data and information in order to achieve the objectives of this research the effectiveness communication of social media for project team.

Systematic literature analysis serves to present new perspectives and to increase the understanding of a specific phenomenon or explain a practical action. This source serves to employ a theory as guidance for the researchers in completing the study. Research always starts with a problem along with questions. The research questions to be answered during the literature review process are as follow:

**Q1: What social media that the project team needs?**

**Q2: How social media helps the project team in communication?**





Research questions serve as guidance to this study and influence the selection and collection of data. Thus, 60 articles have been identified to make use of these searching approaches which later on refined from article publication year. However, this research shows 38 articles identified regarding the effectiveness of social media to project team communication. The data used is composed of

written materials such as books, articles, journals, website and theses by using the ACM Digital Library, IEEE Xplore, ScienceDirect – Elsevier, SpringerLink, Wiley Inter Science Journal Finder and etc. In addition, the systematic search begins with identifying keywords and search terms. We use common keywords in seek to identify as many relevant papers as possible. The search terms were: Social Media AND Project team AND Communication OR Effective Communication OR Effective Social Media OR Communication tools OR Facebook OR Microsoft Lync OR Lync OR Google+ OR Google Hangouts OR WhatsApp OR Skype OR Facebook Messenger OR Youtube.

### 4 Discussion

This research had identified the effectiveness of communication in project team via four social media: Facebook, Google+, Microsoft Lync and Whatsapp (see Table 1). These social media are the four best social media for the project team to communicate compared to any other social media. Furthermore, this research had also identified, 30 kinds of interaction between the project team from previous studies [4]. However 5 additional interactions are newly discovered and regarded as effective communication interaction among the team members. In addition, the four mentioned Social Media posses' different features that made them as medium effective communication.

**Table 1.** Effective Social Media For Project Team Communication

Social Media/ characteristics	Facebook 	Google+ 	Microsoft Lync 	WhatsApp 
Video Conference/ online meeting	No	Yes	Yes	No
Meeting scheduling	Yes	Yes	Yes	No
Discussion	Yes	Yes	Yes	Yes
Task assignment	Yes	Yes	Yes	No
Task schedule	Yes	Yes	Yes	No
Task remainder	Yes	Yes	Yes	No
Notice	Yes	Yes	Yes	Yes
Task progress report request	Yes	Yes	Yes	Yes
Reporting task progress	Yes	Yes	Yes	Yes
Problem notification	Yes	Yes	Yes	Yes
Solution proposal	Yes	Yes	Yes	Yes
Information notification	Yes	Yes	Yes	Yes
Acceptance	Yes	Yes	Yes	Yes
Affirmation	Yes	Yes	Yes	Yes
Negation	Yes	Yes	Yes	Yes
Agreement	Yes	Yes	Yes	Yes
Technical question	Yes	Yes	Yes	Yes
Consultation	Yes	Yes	Yes	Yes
Doubts	Yes	Yes	Yes	Yes
Work authorization	Yes	Yes	Yes	Yes

## 5 Conclusion

In conclusion, this research finds only two social media that is effective to the project team; Google+ and Microsoft Lync. However, in this paper we have proposed Microsoft Lync as another effective social media to a project team when it comes to communication. Although there are similarities in the 35 interactions that had been discussed, however there are still significant differences between the two platforms that users must be aware of.

Team members can use Microsoft Lync and Google+ as task delegation, conference and as a reference tool and giving account managers the ability to showcase each team member's identical documents with real-time updates. Nevertheless, Google Hangouts is limited to 10 users' per-conference and can only be utilized when team members came for conference or online meetings. Microsoft Lync on the other hand, does not have any limit users per-conference.

This will make communication among team members to be more effective. In addition, this research finds to edit any word documents in Google+ Hangouts, the file must upload in Google Docs and must be exported this will create more hassle to the project team to communicate. However, Microsoft Lync enable the team members to view and control whiteboard documents, graphical annotations, illustrations, and power point documents in real-time; giving enterprises the flexibility to change direction and adjust to real-time events. Moreover, Microsoft Lync enables project team to share their desktops including images, videos, websites, and documents. Thus this will speed the learning curve on any project team and improving their efficiency.

Microsoft Lync is designed to be an all-in-one platform. Where else Google+ depends on the third party application. Therefore, this study found out that Microsoft Lync is more effective on project teams to improve communication as compared to Google+. In fact, Microsoft Lync is also beneficial in reducing costs in the company, enhancing employees' satisfaction, and improving communication, and availability thus enhance collaboration among project team.

### Acknowledgement

This research was funded by Fundamental Research Grant Schema (FRGS/2/2013/ICT01/UNISEL/03/2 - Agile Project Managers Competency Model) the Ministry of Education Malaysia.

### References:

- [1] K. P, S. E. Mustafa, and A. Hamzah, "Media Baharu yang Baharu : Trend Penggunaan Jaringan Sosial Dalam Kalangan Pengguna Di Malaysia," no. 1990, 2011, pp. 93–110.
- [2] E. Harrin, *Social Media for Project Managers*. Project Management Institute, 2010.
- [3] M. K. Mutua, "The Role of Social Media as a Collective Intelligence Platform in Project Implementation: Case in Kenya's Vision 2030 Flagship Projects," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 3, 2013, pp. 384–396.
- [4] R. Juarez-Ramirez, R. Pimienta-Romo, and V. Ocegueda-Miramontes, "Supporting the Software Development Process Using Social Media: Experiences with Student Projects," *2013 IEEE 37th Annu. Comput. Softw. Appl. Conf. Work.*, Jul. 2013 pp. 656–661.
- [5] H. Remidez and N. B. Jones, "Developing a Model for Social Media in Project Management Communications," vol. 3, no. 3, 2012, pp. 33–36.
- [6] A. B. U. Bashar, I. Ahmad, and M. Wasiq, "Effectiveness of Social Media AS a Marketing Tools : An Empirical study," vol. 1, no. 11, 2012 pp. 88–99.
- [7] Z. Tasir, J. S. Linggu, J. Harun, S. Ipts, D. Kota, K. Jurnal, and T. Pendidikan, "Penggunaan Alat Rangkaian Sosial di kalangan Pelajar di sebuah IPTS di Kota Kinabalu , Malaysia," 2011, pp. 31–47.
- [8] S. Anand, M. Gupta, and S. Kwatra, "Social media and effective health communication," vol. 2, no. 8, 2013, pp. 39–46.
- [9] C. M. Beise, "IT Project Management and Virtual Teams," *ACM*, 2004, pp. 129–133.
- [10] B. C. Vaught and W. H. Walker, "Decision Making and the Project Team : A Model for Increasing Productivity," 1986.
- [11] H. H. Khan and N. Malik, "Impact of Changing Communication Media on Conflict Resolution in Distributed Software development project," *2011 5th Malaysian Conf. Softw. Eng. IEEE*, 2011, pp. 189–194.
- [12] R. R. Patrashkova-volzdoska, S. A. McComb, S. G. Green, and W. D. Compton, "Examining a Curvilinear Relationship Between Communication Frequency and Team Performance in Cross-Functional Project Teams," vol. 50, no. 3, 2003, pp. 262–269.
- [13] J. Choudrie, "Understanding the role of communication and conflict on reengineering

- team development,” *J. Enterp. Inf. Manag.*, vol. 18, no. 1, Feb. 2005, pp. 64–78.
- [14] J. Downs, J. Hosking, and B. Plimmer, “Status Communication in Agile Software Teams: A Case Study,” *2010 Fifth Int. Conf. Softw. Eng. Adv.*, Aug. 2010, pp. 82–87,
- [15] B. R. K. Wysocki, “Effective Project Management,” 2007.
- [16] A. B. Jeffery, J. D. Maes, and M. F. Bratton Jeffery, “Improving team decision making performance with collaborative modeling,” *Team Perform. Manag. An Int. J.*, vol. 11, no. 1/2, Jan. 2005, pp. 40–50.
- [17] N. Drouin and M. Bourgault, “How organizations support distributed project teams,” *J. Manag. Dev.*, vol. 32, no. 8, Aug. 2013 pp. 865–885.
- [18] Y. Kozak, “Barriers Against Better Team Performance in Agile Software Projects,” Chalmers University of Technology, Sweden, 2013.
- [19] C. Lescher, “Global Requirements Engineering: Decision Support for Globally Distributed Projects,” *IEEE Int. Conf. Glob. Softw. Eng.*, Jul. 2009, pp. 277–280.
- [20] C. Samantha, “Communicate with your staff via Social media,” 2014. <http://www.top-employers.com/nl/nieuws-en-inzichten/blog/2014/05/communicate-with-your-staff-via-social-media/>.
- [21] T. D. Baruah, “Effectiveness of Social Media as a tool of communication and its potential for technology enabled connections: A micro-level study,” *Int. J. Sci. Res. Publ.*, vol. 2, no. 5, 2012, pp. 1–10,.
- [22] J. Simmins, C. Haddad, and J. Robinson, “Social Media in Support of Outage Management Practices,” 2014, pp. 1–5.
- [23] L. Sørensen, “User managed trust in social networking - Comparing Facebook, MySpace and LinkedIn,” *Proc. 2009 1st Int. Conf. Wirel. Commun. Veh. Technol. Inf. Theory Aerosp. Electron. Syst. Technol. Wirel. VITAE 2009*, pp. 427–431.
- [24] T. Pontes, G. Magno, M. Vasconcelos, A. Gupta, J. Almeida, P. Kumaraguru, and V. Almeida, “Beware of What You Share: Inferring Home Location in Social Networks,” 2012.
- [25] P. Casas, A. Sackl, S. Egger, and R. Schatz, “Characterizing Microsoft Lync Online in Mobile Networks: a Quality of Experience Perspective,” 2014, pp. 2–7.
- [26] S. Harbukou, *Software Firm Improves Flexibility, Customer Confidence with Unified Communications*, p. Lync 2013 Customer Solution Case Study, 2013.
- [27] F. Farooq and Z. Jan, “The Impact of Social Networking to Influence Marketing through Product Reviews,” vol. 2, no. 8, 2012, pp. 627–637.
- [28] K. Carlon, “WhatsApp vs Facebook Messenger: the ultimate messaging app comparison,” 2014. <http://www.androidpit.com/facebook-messenger-vs-whatapp>.
- [29] J. Jensen, “Can social media help your project to succeed?,” 2014. <http://www.bcs.org/content/conBlogPost/2324>.
- [30] H. Hu, “Enabling Collaborative Data Sharing In Google +,” 2012, pp. 720–725.
- [31] N. Messieh, “How Google+ could become an essential business tool,” 2011. <http://thenextweb.com/google/2011/07/13/how-google-could-become-an-essential-business-tool/>.
- [32] S. Google, “Video Telephony for End-Consumers: Measurement,” vol. 22, no. 3, 2014, pp. 826–839.
- [33] J. Field and R. Vickers, “Social Media and New Ecologies for Learning: Media Culture 2020,” *AcademicMindTrek’13*, no. ACM 978-1-4503-1992-8/13/10, 2013 pp. 293–299.
- [34] B. Peter, “Lync 2013 is everything that Skype should be. Why do they both exist?,” 2013. <http://arstechnica.com/information-technology/2013/03/lync-2013-is-everything-that-skype-should-be-why-do-they-both-exist/>.
- [35] T. Lee, *Microsoft Lync 2013 review: First look*. 2012.
- [36] D. Wlodarz, “Lync Online: A professional, cheap GoToMeeting and Webex alternative: Review,” *betanews*, 2013. <http://betanews.com/2013/06/24/lync-online-a-professional-cheap-gotomeeting-and-webex-alternative-review/#comments>.
- [37] Earlena, “Clash Of The Great Messaging App Masters: WhatsApp Vs Facebook,” 2015. <http://www.samsungs4deals.co.uk/1957-clash-of-the-great-messaging-app-masters-whatapp-vs-facebook.html>.
- [38] K. Church and R. de Oliveira, “What’s up with whatsapp?: comparing mobile instant messaging behaviors with traditional SMS,” *15th Int. Conf. Human-computer Interact. with Mob. devices Serv.*, 2013, pp. 352–361.