



An Anthology of Scientific Articles IV: A New Beginning

oleh: Civitas Academica Universitas Ma Chung Malang

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Social Considerations for Preparing E-Collaborative Research Implementation

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Abstract

Research in higher education is very minimum in its amount, especially when it comes into collaborative research. However, many researchers try to solve it using e-collaborative research which can handle time and distance barriers. This analytical research tries to dig deep down of social considerations as e-collaborative research being prepared in higher education environment. The results of this research has concluded that social ties, extrinsic motivation, workspace awareness and collaborative exchange can be main factors for researchers to create successful e-collaborative research despite of technical considerations.

Keywords: e-collaborative, social, research

1. Introduction

Research as one of the main activity in a higher education environment particularly in Indonesia which already emphasized as one of *tri dharma* obligation for lecturer. However, it is already proven empirically that lecturers' research in Indonesia is very minimum in its amount (Kompas, 2008). Thus there must be some innovative way which must be provided by university in order to increase lecturers' productivity in research activity.

Some universities try to increase it using internal grant competition or merely forcing their lecturers to create research. On the other hand, government through DIKTI has also try to increase it using many ways such as grant activity (hibah) or also many kinds of rewards (buku njar, anugerah kekayaan intelektual and so on). But still, the increment of lecturers' research in Indonesia is still pathetic.

This research try to explore the social aspects of using collaborative work in virtual way for research activity or commonly named as e-collaborative. Since that e-collaborative has already being proven as one of the booster in increasing productivity in small group which needed to have improvement (Rutkowski et al, 2002). It also very effective when being applied in research field activity (Sonnenwald et al, 2009).

However, implementation of e-collaborative in each organization need special treatment in order to gain better achievement. While the technical approach of e-collaborative implementation has already been proven not becoming the main factor of failure (Sonnenwald, 2009; Kotlarsky & Oshri, 2005; Rutkowsky et al, 2002), therefore this research as pre-eliminary study before reach the modeling and analyzing stage in software life cycle, tries to explore the social aspects in preparing the implementation groupware as e-collaborative in research activity.

2. E-Collaborative

The word collaboration comes from the Latin words com (prefix together) and laborare (verb to work). It means that two or more individuals work jointly on an intellectual endeavour (Webster, 1992). Collaboration itself in this context means that a process by which individuals and/or groups work together on a practical endeavor Collaborative work is a fundamental feature of organizations and is increasingly being supported by technology (Fong,2005). The term of e-collaborative also can be defined as a framework which can create a collaborative situation in certain situation using web based application.

The implementation of e-collaborative commonly done using groupware. Since that one of main characteristic of groupware is making all group members get a chance to take part in activity (Manning & Riordan, 2000), therefore it should be fit in the implementation of e-collaborative. On the other hand, collaborative process which include knowledge sharing has already been proven empirically as one of the factor in contributing successfulnes in collaboration result (Kotlarsky & Oshri, 2005).

3. Social Considerations in E-Collaborative Research Implementation

Implementing E-Collaborative in research field in one of the option while many researchers commonly spread up in different area. This kind of situation should not stumbling block the collaboration process since that they can create a virtual team to solve this problem. However, this implementation has block factors which can deny its main goal, and also has some boost factors which can drive the achievement.

First of all, in implementing e-collaborative there is possibility of wicked user behaviour named as *free riders* (Kotlarsky & Oshri, 2005). This behavior comes from users who just try to put their name in paper but never or rarely contribute to the e-collaborative. However, this behavior rarely shown in collaborative research since that the members of research group really need high acknowledgement rather than just trying to put their names as a credit in research title (Sonnenwald et al., 2005).

Despite of free rider behavior that could bother the accomplishment of e-collaborative research, there are some empirical studies has already tried to reduce this such behavior using specific factors. These factors are:

- a. Social ties (Kotlarsky & Oshri, 2005)
 - The need of social ties between 'researchers, particularly for lecturers in Indonesia, can be an important factor in supporting the achievement of e-collaborative research. However, since that social ties between researchers in Indonesia mostly become tighter merely by the similar institution or place. This happen because there is still cultural gap between "junior-senior relationship" in researchers environment. Thus, this social ties factor can only become success factor only in an institution whenever e-collaborative research being implemented.
- b. Mixed presence implementation (Tang, Boyle & Greenberg, 2004)
 - Mixed presence means that all the participants not only collaborating using the groupware or individual display in remote places, but it also having face to face meeting periodically in

order to solve the problem. This kind of implementation can also become one of success factor beside the other has mentioned previously. Mixed presence not merely force all the e-collaborative members become active contributor (or avoiding free rider behavior), but it also can boost the result of collaborative research. It occurs because of whenever one of the member stucks in the middle of collaborative research process or just trying to become a free rider, then mixed presence should make a distinction between the active and inactive member, thus the collaborative process will get bact in the track again.

- c. Workspace awareness (Gutwin & Greenberg, 1999)
 One important thing in collaboration that every member should know is their role in the collaborative process. Particularly in e-collaborative research which commonly involved many researchers from different theoritical background. Thus, every member should know where to start and when to finish their role part in order to allow others do their next part. This kind of awareness should be assigned by the team leader and must be obeyed by the member in order to optimize the result of e-collaborative research.
- d. Collective exchange approach (Sonnenwald et al, 2005) Since that each researcher commonly has their own tacit knowledge, then they should have done knowledge exchange in collaborative process. When this exchange occur in ecollaborative system, then it will become a collective knowledge exchange before the member can really realize it. This situation can be one of success factor in e-collaborative research implementation, because each member will feel that they get new knowledge and also sharing theirs to others. Thus it will motivate them to contribute more in system while they got hidden acknowledgement from their peers after exchange their knowledge through collaboration.
- e. Extrinsic motivation (Shapira, Kantor & Melamed, 2001)
 The last factor which could affect most of the members named as extrinsic motivation. In an empirical study from Shapira et al, has already conclude that extrinsic motivation such as reward, money and promotion have become main factor for member in contributing their role better. Surely this factor can only happen when the research being conducted by certain institution with

huge fund in it. It also can happen when the research become obligatory in the institution for the researcher in order to gain certain position or certain reward (in Indonesia commonly researchers who also lecturer try to achieve credit point for their JAFA (Jabatan fungsional akademik) which can give them money reward in the future).

4. Conclusion

After exploring some social consideration in preparing e-collaborative research implementation, surely there are some reasonable and logic thought which can be determined. First of all, it better implement e-collaborative research merely in single institution or university to gain better result. Since that the social ties between researchers usually strong in their own "nest", however, the purpose of e-collaborative research is to create more researchers involved in a research theme. Thus it should be continued the e-collaborative not merely in an institution but also create a "real collaboration" among other institution.

It also empirically proven that researchers as "intelectual club members" need a hidden acknowledgement from their contribution in e-collaborative research. Thus, the team leader should become a really smart one in order to create a competitive situation among researchers. The situation then should force the team members exchanging their tacit knowledge unintentionally and becoming aware of their roles in order to finish the research goal.

Last but not least, the research which being conducted in e-collaborative environment should include extrinsic motivation such as fund, certain reward or particular achievement for the team member. Since that extrinsic motivation can become the great teaser for all member to exploit each of their ability in collaborative process.

5. Future Attention

While this research merely focus on social factor before the e-collaborative research being implemented, it should also considering the technical factor which can be constraint in it. Afterward, all the pre-

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eliminary studies must be adjusted by the institution itself according to their own purposes.

It also must consider the institution culture and the research field, whether it in social or technical science, thus the e-collaborative will not become a waste whenever the implementation has been done by the institution.

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