

Twitter Assisted Team Based Learning: Providing a new way of communication in classroom

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Abstract

This paper explores the use of twitter in a team based learning scenario. Twitter has been recently used by many educational institutions but most of these have been related to provide the information to the general audience. There has not been much study done to propose twitter as an educational in a classroom scenario. This paper tries to establish the use of twitter with a well establish mode of Team based learning. The paper also demonstrates the use of twitter in student teams as well as individually by the students. The paper also explains teacher – team and teacher – student communication via twitter.

Keywords: *Social Networking; Twitter; Team Based Learning; Communication.*

1. Introduction

Team based learning (TBL) is based on the use of small groups in order to transform them into high performance teams to accomplish complex tasks. According to Fink [2], “Team based learning is a particular instructional strategy that is designed to (a) Support the development of high performance learning teams. (b) Provide opportunities’ for these teams to engage in significant learning tasks”. There have been a lot of studies that prove that team based learning and teaching have extremely effective to achieve wide range of goals. TBL promotes higher level reasoning, enhances content retention and learning and increases the social support in the classroom. TBL offers an opportunity for an average student to put more effort and enables teams to accomplish tasks which could not have been done by even the excellent students individually [2, 23].

Social networking site like twitter has gained extreme popularity among the internet user over the past few years. These sites were intended for personal communication among individuals but now increasing number of

Organizations are using these sites to engage their stakeholders [13]. Twitter is one such site which has seen huge growth since its launch. Twitter offers a means of informal communication among its users [15]. A lot of studies have been conducted recently on the use of twitter in educational sector. These studies have established that twitter can act as a tool of communication in the modern educational system. Today more and more educational institutions are experimenting with twitter as a tool in education.

This paper examines the use of twitter in a Team based learning system and points out the benefits of using twitter in a TBL system. The paper is organized as follows; first we will provide a brief background of TBL and Twitter. Second, we will discuss the related work done in this regard. Next, we will describe how twitter can assist TBL. And at last, we will provide a conclusion to the study.

2. Background

2.1 Team based learning

The term “Team based learning” was first coined by during the 1970’s. Team based learning (TBL) in education is a technique in which students work together in teams in order to learn things with better understanding. TBL transforms the traditional lecture based coursework into a more active self-learning and promotes teamwork. It allows students to achieve the levels of higher quality learning which can be hard to achieve when students are working individually [1]. TBL involves making small groups of students and using these groups as instructional strategy. TBL links each learning activity to the next activity in order to achieve deeper understanding among

students and develop the teams of higher performance and understanding [2]. As an example, students can be asked to work in teams so that they can cover a more learning material without having to exert excessive pressure individually [3]. According to Michaelsen, Knight and Fink, 2002, there are two specific purposes of TBL:

1. Form Teams of high learning performance.
2. Participate and gain experience in tasks of educational importance.

Another important factor of TBL is group cohesiveness. As the students start working in teams, the group cohesiveness increases which results in higher level of efficiency and understanding among students. Once a student group is formed there are four stages of transforming it into a team. First the students interact with each other. Second, the students review the resources that are available to them. Third students receive a task and work towards its completion. And at last, performance of each individual member of group is evaluated. Once these stages are completed, the group has transformed into the team [1, 4].

One of the important benefits of team based learning is that it helps students with developing skills. Possessing excellent teamwork skills is one of the important factors for employers in the job market [5]. According to a survey conducted by Wall Street Journal, a teamwork skill is the second most important skill for the business graduates to possess [6]. TBL allows students to organize the problems and devise a solution for each problem accordingly. TBL also allows students to interact with each other on a daily basis and enables students to complete tasks within teams [4].

2.2 Twitter

Twitter is today's most popular micro blogging site which gives free service to users. It was developed by Jack Dorsey and was launched in October, 2006 [7]. Twitter allows users to send and receive tweets from other users. Each message on twitter can be of up to 140 characters. These messages are called "tweets". These tweets are available on users profile page and can be viewed and replied to by people known as followers [10]. As of 2011; twitter had 300 million users generating 300 million tweets per day [8]. People use twitter to communicate with each other on constant basis. People also use twitter to get help from other users like asking for directions, advice, support etc. twitter also allows sending message through external applications like smart phones or short message services (SMS).

Probably, one of the first studies on twitter was conducted by Java, Song, Finn & Tseng in 2006. The results of the study found that there are three main categories of twitter users:

1. Information sources: These people tweet news and have a large number of followers.
2. Friends: it's a broad category which covers a large number of users. Friends can include family members, coworkers as well as strangers
3. Information Seekers: There are the people who themselves tweet rarely but follow other's regularly.

Users use twitter for daily chat or to discuss events in their life. People also use twitter to share their thoughts as well as share information and URL's. People also use twitter to comment on current events and also on some news items [12].

3. Related Work

Twitter has been subject of research among many scholars recently. In some earlier work, researchers have mainly focused on the usage areas of twitter. Some researchers have also focused on the network areas of the twitter to find out the usage of twitter by people [7]. For example, Wigand [13] discussed the use of twitter by government organizations. The research explored the use of twitter and web 2.0 technologies by the government departments in US including the congress, NASA and U.S. Air Force. The research argued that twitter can be established as a medium for communicating with citizens and enhance collaboration in a way which might be hard to achieve with other platforms. Another study by Java et al [11] presented an overview of user intentions behind using twitter. The research also studied the geographical and topographical properties of twitter to conclude the user intention of using twitter as information sharing, information seeking and social activity [7, 11]. Honeycut & Herring [12] discussed the conversation and collaboration with respect to @ sign among the users of twitter. The study discovered high degree of conversation among the users. Zhao & Rosson [15] discussed the motivation behind using twitter. The research discussed the relational and personal benefits of using an informal mode of communication. All of these studies revealed that twitter can be used an information platform to send messages to the other users. Junco, Heiberger & Loken [14] Provided and experimental evidence to establish that twitter can be used as an educational tool to engage students and faculty into an active role and increase their participation the educational process. The research concluded that twitter increases student engagement and has a positive effect on student

grades. Grossec & Holotescu [9] discussed the use of twitter for educational activities. The study presented the use of twitter in educational sector with respect to Romanian Twitosphere. The research presented the benefits, drawbacks and the logistics of using twitter as an educational tool. Goroshko & Samoilenko [17] presented the use of twitter as a platform for global academic academy to engage in a real time dialogue. The paper discussed the potential of twitter as an educational system in both e-learning 2.0 and e – learning3.0. The paper concluded the potential of twitter in global educational world where students and faculties communicate online in both virtual and real classrooms to achieve the idea of whole learning. Borau, Ullrich, Feng & Shen [18] used twitter tool for communication in shanghai Jiao Tong University where English is a foreign language. The results of study indicate that 70% students indicate that it's easy to communicate using twitter while as none of the students disagreed with this fact. Al-Khalifa [19] proposed the use of twitter to send updates to students on mobile phones. The researcher proposed three benefits of sending twitter updates on mobile phones as better connection with students, time saving and timely announcements. The study also found that 76% of students were satisfied with this service with 93% saying that they would prefer this mode of information for future courses

4. Twitter Assisted Team Based Learning

In TBL majority of class time is spent on activities so that students can learn to solve problems which they are likely to face in professional world. According to Michaelsen et al [20], there are three phases of any Team based Learning; preparation phase, application phase, assessment phase. We will discuss how twitter can assist and enhance each of these three phases [21].

4.1 Twitter Assisted preparation phase

In this phase students read the topics before they are discussed in the class. The main aim of this activity is to have a prior knowledge about the topic to be discussed in the class. This phase starts with individual preparation of the topic by each student of the group followed by discussing the topic in the group. The students first run the test individually followed by the same test in the group. Both the tests are graded in class and announced. And at last teacher offers understanding of the concepts that were not understood by the class. This marks the end of the preparation phase.

Twitter can be of extreme importance in this phase. Firstly, students can communicate with teacher as well as among themselves to know about the topics to be discussed in the class before they actually enter the class. The teacher can

tweet the topic name on their twitter page and all the students can have a prior knowledge about the topic. Once the topic is provided, the students in the group can discuss topic among each other both prior to coming in the class and during the class. Once the test is conducted individually, the team test can be conducted over twitter with the specific question send to a particular team. Students in the group can communicate with each other by tweeting their thoughts on the question. This will enable students to work individually on the question and discuss it in the group. This will also help teacher to know about the students actively trying to solve the question and also about the students who are not contributing to solve the problem. This will enable teachers to identify the weaker student in the group and possibly put more effort towards the weaker students of the group. Once the tests are conducted individually as well as in groups, the teacher can declare results and provide solution to the question over twitter. This will allow each student to cross examine their result and check the weakness in their answer. Once the results are announced the students can discuss the results among themselves with teacher having an eye on the discussion. Using twitter in this way enables to continue the classroom activity even after the class. Once the class is over the students can continue discussing the question even after the class and can continue discussing the topic even at their home. The teacher can also participate in the discussion even after the school is over. The teacher can add to the topic at any time. The teacher can choose to inform few things about the topic so as to start the discussion and then gradually add to the topic over twitter. This will increase better reasoning among students and can help students to research more about the topic.

Twitter will also allow students an easier way to ask questions. If there is any point in the topic that a student don't understand or need more clarification, he can ask teacher or his team by raising the point on twitter at any time.

4.2 Twitter Assisted Application phase

In this phase students apply the knowledge of the course content they learned during the preparation phase to solve the problems, make predictions or create explanations for complex problems. Each group or team in this phase provides their responses to the problem in the class and the teacher evaluates the responses of each group to provide feedback to every group. At the end of this phase, students learn to work in team to provide solutions as well as form a strong bonding with the other students in the group.

Twitter can help in this phase by connecting students with each other as well as with teacher. The constant contact between students and the teacher create cohesion among

them which is important for student persistence [14]. Twitter can act as a constant medium for student groups and teacher interaction which is an important factor for the success of students [22].

The students in this phase can solve the problems and share their responses via twitter with other members of the group or to the whole class and teacher. The teacher can also form a network on twitter for a particular group or for the whole class. The teacher can post their responses on the twitter and can make it visible to a particular group or student. This will create a secret form of communication between teacher and the students. The teacher can choose to guide a particular group or student if they are not doing well as compared to the class. The student can post their arguments and question anytime on the twitter and the teacher can choose to respond to these questions at any time on twitter. This will promote out of class learning and students and enable anytime / anywhere learning.

4.3 Twitter Assisted Assessment phase

This is the Final phase of team based learning. In this phase teams are required to solve the problems based on the understanding of the course material [21]. This phase also allows students to use the previous studied material

and incorporate it with the new material [1]. The responses from each team are evaluated by the teacher and the grades for each student and teams are decided.

Timely feedback is one of the fundamental principles of team based learning. It helps students in content retention and learning which in turn helps in student and team development [2]. Twitter can help in this notion of timely feedback. A teacher can provide feedback to student and teams on twitter as soon as he is done with the assessment. For student it provides an opportunity to readily assess their performance as well as the performance of the team. A team can also share their comments regarding their results and performance.

Besides helping teacher and teams to accomplish their tasks, Twitter can also help in the formation of groups. According to Junco, Heiberger & Loken [14], it's easy to organize students into groups via twitter. A teacher can ask students about their interesting subjects and thus can form groups based on students with similar interests. Twitter can also act as a debate starter. For example, a teacher can post some topic on twitter page and ask teams about their thoughts about the topic. This can encourage out of class learning. Teams can discuss the topic over the twitter before the topic is actually discussed in the class.

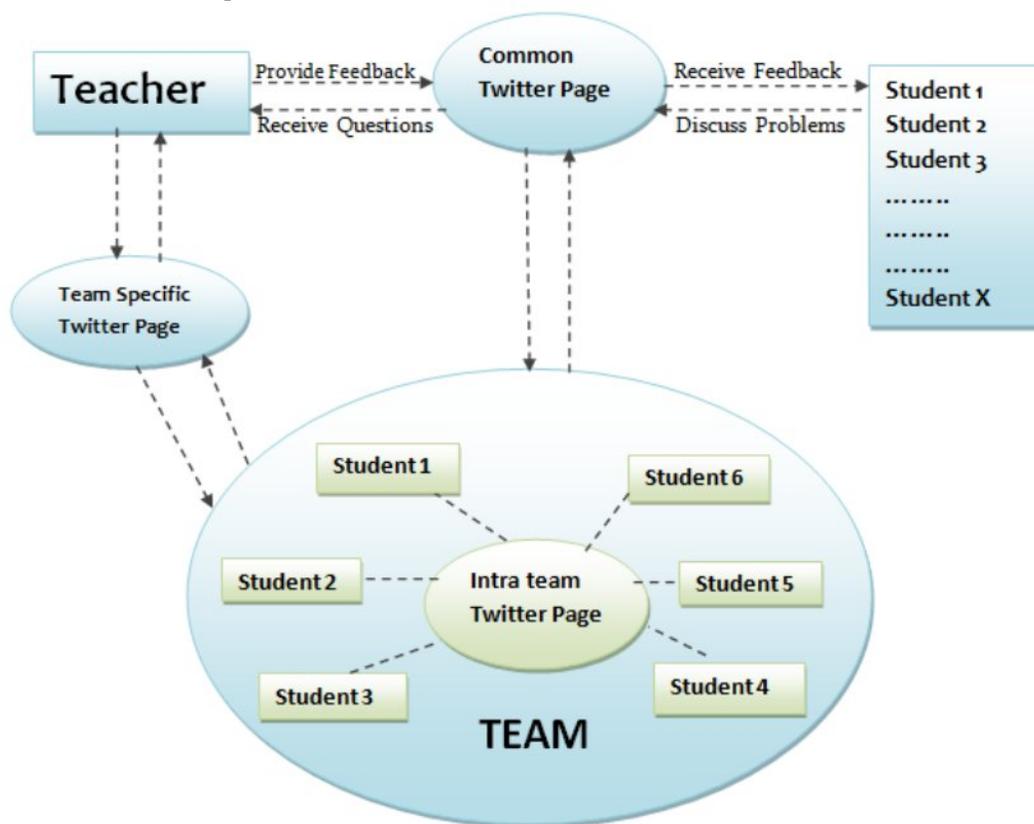


Fig. Twitter Assisted Learning

Figure above shows a general framework of using twitter in a classroom structure. A team can communicate with each other using twitter as well as communicate with teacher and other students in class via twitter. Teams can set up their intra team twitter page and discuss the problem assigned to the in team. Teams can remain in constant touch with each other even outside the class and can increase cohesiveness among the team which is important for the successful completion of the tasks. Students can also communicate individually with groups, teacher and other students via a common classroom twitter page. Teachers can disseminate classroom information on the common twitter page of the classroom. As far as teacher-team communication is concerned, this can be accomplished by forming a team specific page. Each team in the class can for a page which is connected only to their teacher. Teams can post their questions on this page and can receive answers from teacher on this page without the interference of out of team members. This can help to increase the teacher- team communication and can allow teacher to access the progress of each individual team. If the teacher has comments for a particular team, teacher can post his comments on the team specific page without other teams and students getting to know about the comments. This can encourage the teams to work hard without going through embarrassment in front of the class.

5. Conclusion and future work

It is established that TBL can enhance education in multiple ways. Recently twitter has been used by many educational institutions as a tool to enable student achieve the desired outcomes. More and more educational organizations are using twitter in one way or the other. Keeping this in mind, we tried to demonstrate how twitter can further enhance the widely accepted mode of learning i.e. TBL. We tried to establish the high level of inter student, intra team interaction, student – teacher and team – teacher interaction via twitter. This study demonstrated to use twitter at each phase of TBL as well as tried to demonstrate the use of twitter in a general based classroom scenario. The paper tried to suggest the ways in which twitter can be used in a TBL. As the use of twitter in educational institutions grows, we recommend measuring the impact of twitter in a TBL scenario. We also recommend measuring the impact of twitter with other learning scenario as well as explore new ways of integrating twitter into classroom structure.

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