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## Development and Evaluation of Team Work Skills Through the Preparation of **Group Assignment Coursework Using Meeting Minutes**

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#### Abstract

In the management of an organization, meetings are an important mechanism for a leadership to achieve organizational objectives, in particular as a democratic decision-making and feedbacks observationmechanism. In ensuring the meeting serves its function, the progress of the meeting is documented in the meeting minutes. As a result, the leader is able to easily gain members' commitments and assuring that the meeting progresses in tandem with the goals outlined. This qualitative study aims to investigate the use of meeting minutes through the adaptation of teamwork skills development model as teamwork skills development mechanism, in preparing assignment of Islamic education professional courses offered to Part 3 students of the diploma program at Universiti Teknologi MARA Perak Branch. The study employs library research, interviews and observations as research instruments. Library research is done by collecting data on previous studies pertaining to teamwork skills elements to develop a guided minutes of meeting template as instructional material for teamwork skills development. Observations are conducted on both process and result of the application of the minutes of meeting template during the preparation of student workgroup assignment. Selected informants are interviewed to generate their perspectives about ideas, opinions and experiences pertaining research topic. As the result of the study, it's found that the minutes of meeting as a recognized validated document by all meeting member functioned as an early alert system for educator in detecting free riding tendencies of a group member, as well as become a valid evidence for evaluation members contribution towards team performance.

Keywords: Soft skills; Student leadership; Team work; Minutes of meeting; Group assignment.



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#### 1. Introduction

In realizing the mandate of the Malaysian Higher Education Development Blueprint (2015-2025), the Ministry of Higher Education Malaysia has introduced an integrated mechanism known as the Integrated Grade Value (iCGPA) for use for assessment, achievement reporting and student development. The implementation of this iCGPA refers to the development of the 6 main attributes namely; ethics and spirituality, leading skills, national identity, language skills, thinking skills, and knowledge mapped with 8 domains of study in the Malaysian Qualification Framework for Higher Education ie knowledge aspect; practical skills; social skills and responsibilities; values, attitudes and professionalism; communication skills, leadership and teamwork; problem solving skills and scientific skills; information management skills and lifelong learning; and managing and entrepreneurial skills. The basis of this writing is to specifically referring to the second attribute of leadership skills described as effective communicators, intelligent emotions and able to interact across cultures; responsible, competitive, grateful and confident; as well as the fifth domain in the Malaysian Qualification Framework (KKM), namely communication skills, leadership and teamwork, focusing on one of the elements of leadership namely teamwork skills.

## 2. Background Study

Group learning is one of the fastest growing educational instruments in Malaysia's higher education system, as one of the responds to world development that focuses more on student-centered learning (Neo, 2005). According to Biggs and Tang (2009), these developments refer to two main objectives namely, the development of interpersonal skills as well as the skills associated with teamwork; reducing the teacher's load in the scoring process. In a study involving 167 professionals, Rosima *et al.* (2013) found that respondents chose teamwork as the most contributing construct in carrying out their duties. Whereas the results of the survey released by the National Association of Colleges and Employers (NACE) in 2016, 78% of the 169 employers comprising large companies such as Seagate Technology, Nestle USA and Abbott Laboratories, chose teamwork to be given attention from applicant resumes (NACE, 2017). Hanover Research (2011), which compares 6 frameworks involving a list of 21st-century soft skills, also found teamwork in the first listing. The World Economic Forum puts together collaborative skills among the 4 key skills in preparing students for the 21st century (Soffel, 2016). In terms of student development, many studies have shown that group work learning is an effective teaching strategy (Johnson and Johnson, 1989) in particular regarding the improvement of student academic achievement, interpersonal relationship skills, positive attitude towards the course of study (Johnson and Johnson, 1994), critical (Gokhale, 1995), as well as improving understanding and memorizing (Boud *et al.*, 1999).

The application of teamwork related skills is seen as contributing to the formation of a more positive attitude towards teamwork in the future (Ulloa and Adams, 2004). However, studies also point out that failure to manage teamwork can cause opposite effect (Pfaff and Huddleston, 2003). Factors such as conflict between group members (Miller, 2003), disparate distribution of responsibilities and roles and free rider problems (Brooks and Ammons, 2003), can negatively affect student attitudes towards teamwork. These poor experiences can causes lose of interest in future teamwork (Ulloa and Adams, 2004). This implies that the use of teamwork methods with the aim of building teamwork skills, if not managed properly, will not only cause failure to contribute to the development of skills as desired, but also leads to the opposite effect. According to Tucker and Abbasi (2016) these negative effects originate from two main reasons. Firstly, group assignments are given without proper training related to teamwork development. This is because teamwork skills as well as other skills are unlikely to be mouldedinstantly without guidance from more experienced parties (Bain, 2004). Secondly, the failure of the measurement system to considers and intergrate the processes of preparation of the assignment into assessment, but only refers to the final submission (Tucker and Abbasi, 2016), while the success or failure in producing final product not truly indicates the success or failure of teamwork skills (Hughes and Jones, 2011). In some cases, significant contribution of only one member is sufficient to produce a good end product, while others work minimally (Hughes and Jones, 2011). Outcome is simply not a valid indication of the improvement of teamwork skills nor does it deny negative implications to the development of such skills.

Accordingly, the mapping of the course oucomes with teamwork skills elements cannot be validated by merely looking for the present of group work assignment in coursework assessment, where as the educating and measuring processes are not reliably explained. Therefore, in order to avoid negative impacts due to lack of skills among group members, the use of collaborative learning methods through group assignments in measuring student academic achievement, must be integrated with skill development training and active teamwork assessment. This is to ensure that all group members are given opportunity to undergo constructive teamwork experience. Referring to the implementation of Islamic study courses offered to the Part 3 diploma students at Universiti Teknologi MARA (UiTM), which are known as the professional courses; out of 50% of the course's work assessment score,15% is allocated for the essay writing as a group assignments and 20% scores for the presentation of the essay that are also produced in group. This makes the overall score of 35%. Of these marks, 5% is allocated for teamwork domain assessed in the final phase of teamwork process, group presentation. This indicates that the measurement system does not consider the preparation process. Similarly, the absence of weightage given for teamwork skill in group essay writing assessment, essentially raises questions about role of lecturer in educating teamwork skills.

## 3. Research Questions & Objectives of Study

In conclusion, the above discussion explains two important issues regarding the use of group assignment instruments as the instructional medium. Firstly, the use of such instruments ought to involve the development of teamwork skills by the instructors, in order to avoid negative implications when students are left without guidance. Secondly, to evaluate the processes of the implementation of team work skills as well as evaluating the final results. Based on these two premises, two major questions need to be addressed. First, how educators be able to find opportunities to train teamwork skills and also to obtain and provide periodic feedbacks throughout the processes of assignment preparation (Fink, 2003), within the time solely provided in course syllabus for teaching? Secondly, is how to evaluate teamwork processes which are largely happen outside the classroom? In this regards, all the processes followed in preparing the assignment should to be documented for the purpose of evaluation. As teamwork is part of leadership skills that involves meetings, accordingly the minutes of meeting are the best document to record teamwork process. It's when the criteria of teamwork skills development are observed in the minutes, it is hence, the evidence of the existing of the process.

Our research questions are:

RQ<sub>1</sub>: What is the appropriate elements of teamwork skills to map with group work processes in preparation of students workgroup assignment?

- RQ<sub>2</sub>: What is the appropriate approach for using minutes of meetings as an instructional material in teamwork skills development?
- RQ<sub>3</sub>: What is the appropriate techniques for using minutes of meetings as a reference in assessing student's team work skills?

Therefore, the objectives of this writing are to:

- 1. Identify the appropriate elements of teamwork skills to map with group work processes in preparation of workgroup assignment.
- 2. Propose the use of meeting minutes as an instructional materials for the purpose of developing teamwork skills.
- 3. Propose the use of minutes of meetings as a reference for student's teamwork skills assessment and scoring.

#### 4. Teamwork Skills Attributes

Generally, teamwork is a leadership concept consisting of several constructs determining its existence. In the context of this writing, the teamwork constructs were identified based on two teamwork models introduced by Adams *et al.* (2002) and Tarricone and Luca (2002), as follows:

- 1. Share the same key goals. Each member has a clear and specific understanding that is based on mutual sharing of values and beliefs of the group's ultimate goal which is the basis of every undertakings, which makes them motivated and focused on it.
- 2. Responsibly interdependence. An effective working system was created through the synergy of abilities, ideas and skills of every member who needed each other to produce something better than individual achievable results.
- 3. Interpersonal skills. Each member is committed to the comfort of their co-existence by creating a conducive working environment, mutual trust, concern, respect, support and tolerance to one another.
- 4. Mature communication. Being able to communicate ideas effectively and at the same time being a good listener, can give and receive feedback positively.
- 5. Clear role. Understand each other about the functions, roles and forms of contribution expected for the benefit of the group.

Effective and responsible leadership. Each member conducts leadership functions effectively, addresses the conflict well, makes decisions based on consensus, distributes tasks fairly, monitors the progress of the assignment and is responsible for the donations.

## 5. Methodology

Group assignment is one of the methods of cooperative learning-based instruction. It involves the formation of a small group of students formally and structurally, to work together and contribute to the success of a common mission (Johnson et al., 1991; Slavin, 1980; Smith, 1996). The common goals set forth in the assignment is intended to encourage students to form effective collaborative relationships to achieve the goal (Harris and Harris, 1996). According to Luca and Tarricone (2001), the success of a group depends largely on synergy among group members who voluntarily contribute to the creation of a positive atmosphere for teamwork. In organizational practices for a structured leadership, meetings are the best platform for carrying out leadership and teamwork functions in determining visions and missions, planning strategies, making decisions, improving good reviews or monitoring, and others. Effective implementation of the meeting will create a positive diversity of formal communication in the organization in carrying out the entrusted work and consequently, achieving the mission and vision of the organization (Samsuni and Hadi, 2005). Hence, the meeting becomes the nucleus of a team work. According to Geimer et al. (2015), there are four key elements of effectiveness of meetingie human (meeting members), meeting management, meeting activity and meeting results. The activity of the meeting refers to the discussion in relation to the purpose of the meeting. While the outcome of the meeting refers to the decisions made during or after the meeting which will affect the actions outside the meeting in carrying out the duties in a positive or negative manner (Geimer et al., 2015). Physically the results of the meeting are recorded in the minutes of the meeting as the only result that can be referred to after the meeting (Jennings, n.d.). It is a historical record of teamwork, as a testimony to the implementation and achievement of group objectives (Gutmann, 2016), which involves processes such as mission assignment, strategy planning, task distribution, reporting and improvement. Thus, the success of a teamwork involving the above work process can be identified through the minutes of the meeting.

In the context of the implementation of professional courses related to Islamic education of diploma programs in UiTM, there are two forms of learning instructions that involve teamwork elements. First, essay writing through group assignments and secondly, group presentations. Both of these instructions generally involve the development of domain of written communication skills, oral communication, teamwork, lifelong learning and professional ethics. The overall synthesis of this domain is aimed at training students to collect and disseminate information responsibly, trustworthy and transparent using teamwork mechanisms. To achieve this, the task preparation process can be divided into 4 main objectives involving 4 phases of implementation in the preparation of group assignments; 1) training of identifying and contributing at least two authoritative referral sources for the group, 2) guiding of writing two paragraphs essay responsibly and transparently using references sources obtained, including presenting the citation correctly, 3) guiding the essay writing of 400 words without plagiarism, meeting subtitles distributed jointly using responsibly and transparently authoritative sources of references, 4) guiding of writing essays's introduction and conclusion and making amendments based on feedback received. In order to achieve the objective of teamwork

skills development in carrying out group essays and presentations, each group is provided with a meeting-minute template that contains the outputs of meetings that have been mapped out with elements of teamwork skills (Adams et al., 2002; Luca and Tarricone, 2001), written in the form of the results of the standard meeting with blank spaces aimed at promoting discussion and decision making. The leader of the group is responsible for ensuring the meeting is directed to minute the outcome of the meeting suggested in the template. To ensure that these instructions achieve the objectives, the involvement of the lecturers is required in three phases (Fink, 2003), ie; 1) briefings and discussions with the leader of the group in particular regarding the use of meeting minutes templates and activities to be carried out, 2) to guide and direct each group to carry out group preparation activities in 4 phase, 3) conducting feedback sessions and joint evaluations with group members after each phase of implementation. The last feedback session also held for the group under lecturer facilitation to decide appropriate marks for each group member.

In this study, five classes of students from four different academic programs were selected and divided into five groups for each class. All groups were given the template and asked to follow the pre-written minutes in guiding their meeting process for preparing their group assignment. Observations are conducted on both process and result of the application of the minutes of meeting template during the preparation of their workgroup assignment particularly via group coaching sessions. At every feedback sessions selected informants are interviewed to generate their perspectives about ideas, opinions and experiences pertaining research topic.

# 6. Minutes of Guided Meeting as Instructional Material and Assessment of Coursework

Meetings are considerably the nucleus of a team work. The decision of the joint meeting is the beginning of a team work while reporting is the closing. The meeting minuesserves to record the results and reports. In order to facilitate monitoring and feedback on the tasks given, two meetings need to be held for each phase of implementation, where the first meeting is held for decision-making and the second meeting is for reporting. Each group is required to utilize the meeting minutes that have been mapped with the team work attributes and producing both meeting minues during the feedback session with the lecturer for assessment. Every meeting minutes contain three main agenda: 1) the chairperson's speech, 2) Report on the execution of task decided during the last meeting except for the first meeting minutes, 3) Outcome of the recent meeting, as well as other agendas such as the verification of the last meeting minutes and closing minutes.

Taking the first phase as an example, the objective of this phase is to train students to identify authoritative source of references, where the result of the training is the success of members in contributing a number of authoritative sources of reference to the group. This activity if properly minuted, would enable the identification of the role of each member and consequently, the level of teamwork can be identified and evaluated. In this phase, two meetings should be conducted. The first meeting is to ensure two meeting agenda namely the chairman's speech and conducting decision-making session. While the agenda of second meeting is for reporting progress of the task of previous meeting and also to conduct feedback sessions to determine further action. During the first meeting, the chairperson's speech agenda (see diagram 1) is specifically aimed at explaining the process of execution of the tasks to provide a comprehensive essay and efficient presentation based on the guidance provided by the lecturers. This agenda involves activities including appointment of secretaries for the meeting, team engagement session, explanation of the process of preparation of the assignment and the phases involved and the understanding of the concept of sourcing the resources. Each activity on this agenda is mapped out with an effective and responsible and interpersonal leadership team work elements.

Figure-1. Chairperson's Speech Agenda

The First Meeting Minutes				
No.		Items	<b>Teamwork Elements</b>	
1	Chai	rperson's Speech		
	1.1	The Chairperson appoints	Effective & responsible leadership	
		meeting The Chairperson thanked the group members for being entrusted with the role of leading the group members and requested each member to commit to the task preparation process	Effective & responsible leadership; Interpersonal	
	1.2	The Chairperson explained that each member should undergo the phases of the preparation of the assignment beginning with; 1) identifying the authoritative references, 2) writing 50 words using 2 reference sources, 3) writing 400 words of related subtitles using sufficient reference sources, 4) writing of introduction and conclusion and amendments if required	Effective & responsible leadership	
	1.3	The Chairperson informed the concept of authoritative references and its relation to the responsible value		

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As for the agenda of decision-making (see diagram 2), the general objective of the agenda is to conduct discussions and to make joint decisions on activities namely: 1) formation of a joint mission, 2) acceptance of assignment title, 3) taking responsibility for contributing at least two authoritative references and 4) take responsibility for understanding the concept of authoritative resources for future discussion sessions. Generally, as every item on the agenda involves discussion and decision-making, the whole activity involves effective and responsible leadership elements as well as mature communication elements. However, there are also specific elements practiced such as sharing common goals, interdependence among members and clear roles.

Figure-2. Decision Making

The First Meeting Minutes				
N	Items		Teamwork Elements	
0.				
2	First Meeting Meeting 1			
	After gaining views of all the members present, the consensus @ majority			
	(eithe	er one) agreed:	Mature communication;	
	2.1	Set goals together to score as many of the 35 overall scores.		
	2.2	Receive the title, as the group's task title		
	2.3	Receive assignment to contribute 2 authoritative references ources for titles	Share goals	
		to be confirmed in a second meeting to be held on	Mature communication	
	2.4	Read and understand the concept of reference source authoring and	Interdependence; Clear	
		related scoring rubrics and method of writing reference sources in APA	role.	
		style for future meeting needs	Interdependence; Clear	
			role.	

Meanwhile, the reporting agenda during the second meeting (refer to diagram 3) is intended to obtain a report on the progress of the assignment in the form of referral sources from each member. The reference source contributions to the group refer to the application of effective teamwork and responsible leadership elements as well as interdependent elements of each other. This agenda also exhibits interpersonal elements by creating mutual help and facilitating writing of references according to the American Psychological Association (APA) style.

Figure-3. Reporting

The Second Meeting Minutes			
No.	Items		Teamwork Elements
3	Repo	orting of the First Meeting Decision	
	3.1 3.2 3.3	Ahmad reported two reference sources: (please discuss and write references according to APA style) a) relates to from reference sources (write in APA style): Ahmad. (2013). Islamic Banking In Malaysia. Drpd http: www.banknegara.gov.my/perbankan islam.html. b) relates to Eimaan reported two reference sources: a) relates to from reference source (APA style) b) relates to Abu (to replace) reported that he failed to obtain the reference source as requested (whichever related)	Effective & responsible leadership; Interdependence; Interpersonal  Effective & responsible leadership; Interdependence; Interpersonal

The second meeting ends with a decision-making agenda in the form of feedback to member reporting (see diagram 4). For this agenda, the meeting discusses whether the reported source of reference meets the criteria of the authoritative source of reference, deciding to accept or reject it and decide on the next action. The two key elements of teamwork displayed on this agenda are effective & responsible leadership and mature communication. In addition, there are clear and interpersonal role elements.

Figure-4. Feedback

	Agus rectback			
4	Decis	ion of the Second Meeting	Effective & responsible	
	After gaining views of all members present on the authority of the referring		leadership;	
		e, the consensus @ majority (either one) agreed:	•	
	4.1	Receive reference sources 3.1 (a), 3.1 (b), 3.2 (a), 3.2 (b) (to delete irrelevant sources) for meeting the criteria of the authoritative	Mature communication	
	4.2	Rejecting reference sources 3.1 (a), 3.1 (b), 3.2 (a), 3.2 (b) (to delete irrelevant sources) for not meeting the criteria of authoritative	Mature communication	
	4.3	Request members to produce a reference sources in the next meeting	Clear role	
	4.4	Requesting Ahmad and Eimaan to assist Abu in retrieving the necessary referral sources	Interpersonal	
	4.5	Request the secretary to bring the first and second meeting minutes in the feedback session with the lecturer	Clear role	

## 7. Teamwork Rubric Assessement

There are several approaches that can be used to evaluate teamwork skills among students, such as using group journals (Neo, 2005), multi-choice question testing (Hughes and Jones, 2011) and fellow group members (Hughes and Jones, 2011; Stein *et al.*, 2015; Tucker and Abbasi, 2016). However, in the context of the development of soft skills conducted across the curriculum, without a standalone course, the assessment method should also be adapted to the teaching and learning process influenced by that position. In relation to that, looking at the assessment of teamwork skills in Islamic education courses at UniversitiTeknologi MARA, the use of minutes of meetings as a reference to the process of assessment of teamwork skills is based on several matters. First, a small amount of weighting is 5 percent; secondly, evaluations are conducted by lecturers manually; Thirdly, it involves a large number of students. Ideally, the development of teamwork skills refers to the up growth of constructs forming the elements of the skills development which is proven through authoritative surveys.

In utilizing the guided meeting minutes, these constructs have been mapped in advance with the activities of the meeting. Accordingly, the implementation of the meeting which meets the guidelines indicates the application of teamwork skills amongst group members. In order to ensure the reliability, validity and fairness of the assessment carried out, the reference is made only on the realistic and quantitative elements complementing the two-dimensional appraisal, in terms of inclusiveness and depth. Marks are given to general and individual scores. The overview of construct applications by a group is referred to the number of meetings held, given that every two meetings are needed to achieve a specific objective through the application of specific team work skills constructs. Accordingly, four objectives are achieved through 8 meetings. In order to serve justice to the members present during the meeting, demerit scores may be imposed on members who are absent. The rubric proposal is as shown in diagram 5 with a full mark of 2.5 marks

Figure-5. Worksheet of the number of meetings of a team

Items	Indicators	Marks
	8 meeting minutes	2.5
	6 meeting minutes	2
Number of Meeting Minutes	4meeting minutes	1.5
Number of Weeting Windles	2meeting minutes	1
	No meeting minutes	0
	8 meetings	2.5
	6 meetings	2
Demerit of absenteeism	4 meetings	1.5
Demerii oj uosenieeism	2 meetings	1
	1 meeting	0.5

The aspect of depth refers to the group's commitment and expertise in achieving the task's objectives. This aspect is measured by the percentage of members who submit the results of the assignment within the timeframe of the overall implementation phase in achieving the objectives set forth. This assessment also considers individual aspects with a demerit approach. As it is perceived that the member's commitment is influential to the group's commitment, the willingness aspect is also considered by allowing groups to remove members failing to demonstrate commitment on the basis of the meeting's decision. The rubric proposal is as shown in diagram 6 with a full mark of 2.5 marks.

Figure-6. Teamwork group teamwork commitments

Items	Indicators	Marks
Percentage of commitment	81 - 100 % commitment	2.5
	61 - 80 % commitment	2
	41- 60 % commitment	1.5
	21- 40 % commitment	1
	1 - 20 % commitment	0.5
	0 % commitment	0
Demerit of no commitment	Fully no commitment	2.5
	4 times	2
	3 times	1.5
	2 times	1
	1time	0.5

## 8. Result and Discussion

This discussion is referring to two major questions addressed above; firstly, how educators be able to find opportunities to train teamwork skills and also to obtain and provide periodic feedbacks throughout the processes of assignment preparation; and secondly how to evaluate team work processes which are largely happen outside the classroom.

From minutes of meetings submitted by all group assignment, it's observed that all the groups were successfully demonstrate the using of minutes of meetings in reporting their workgroup assignment preparations processes. It's also observed the groups commitment to record all type of cooperations and contributions from their members at all stage of four assignment preparation stages by following the meeting minutes suggested in the given template. It's also found recorded in minutes of meeting out of 25 groups, 3 difficulties facing by the group in getting team member commitment namely; absence from group meeting without permission, failure to complete their assigning tasks on time, and abstaining from giving any contribution due to personal problem.

For the first question; firstly, the using minutes of meeting itself is part of leadership skills requirement in workplace. So by experiencing the using the minutes of meeting, students were inevitably morel essexposed to this requirement. However, it is suggested for further study to examine the impact of using minutes of meeting on student leadership skills development. Secondly, the information recorded in the minutes of meeting also enable lecturers to find out group problems at it earlier stage. Minutes of meeting as a validated document that have been recognized by all meeting members, opened a space for the lecturers to bring the problem into discussion with the group members and coaching them to decide appropriate solution and also to get rid of any free riding tendencies. Regarding to teamwork evaluation in the second question, the minutes of meeting as a validated document recognized by all meeting members, also provide dlecturers with valid informations of each group member contributions. By the time of holding joint evaluation discussion with all group member to finlise individual marks, this information is an integral evidents for lecturer to facilitate the group members to decide suitable and satisfying demerit mark according to the teamwork rubrics given.

## 9. Conclusion

Teamwork skills are listed among the 10 significant skills required in the context of the Industrial Revolution 4.0 and are ocassionally prioritized as the key skills. The industrial revolution has caused tremendous changes to the type of technical skills required, making the contents of the current technical skills of students emphasized through academic courses is no longer relevant. As a result, contextual skills with which students are more flexible in accepting changes becomes essential. Among the skills accentuated are teamwork skills. Based on this prioritization, it is proposed that the focus of the development of selected soft skills such as teamwork skills be carried out more seriously by making it a distinctive course and as opposed to cross curriculum approach.

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