The Role of Interactive Whiteboard on Classroom Management

Hamdi Serin

Department of Mathematics Teaching, Ishik University, Erbil, Iraq
Email: hamdi.serin@ishik.edu.iq

Abstract
Recently technology-enhanced applications have become an increasingly important component of education. There is no doubt that the use of technology in education has yielded improvements in learners' achievement. Interactive whiteboard, regarded as one of the most effective educational tool, has the potential to revolutionize classroom instruction. Moreover, interactive whiteboard supports classroom management through motivating learners to participate in classroom activities. The use of interactive whiteboard enhances learners' engagement in the classroom which facilitates classroom management. This study focuses on the impacts interactive whiteboard makes on classroom management. A questionnaire including 100 participants was conducted and the study found that the use of interactive whiteboard in the classroom largely influences classroom management.
Keywords: Interactive Whiteboard, Classroom Management, Learner Engagement, Achievement

Introduction
The role of technology in education has been widely stressed lately. The integration of technology into education has promoted educational settings and new approaches to teaching and learning have emerged. The inclusion of technological devices led to effective teaching and learning furthermore; the use of technology positively influences classroom management in the classroom. Interactive Whiteboard (IWB) has been widely used recently in educational settings and many studies have been conducted on the impact of technology on education and most of them yielded positive outcomes of IWB in the learning environments (Garrett, 2009; O'Dowd, 2007; Brouse et al., 2011; Burden, 2002; Orr, 2008; Soares, 2010; Walker, 2003). General attitudes towards the use of IWB are that it reinforces participation, interactivity and motivation in the classroom.
IWB has the potential to provide a wide range of activities for learners. Classroom activities not only increase learner engagement but also facilitate the teaching and learning process. Moreover; when IWB is employed learner achievement is promoted (Dhindsa & Emran, 2006). Swan, Schenker and Kratcoski (2008) investigated the influence of IWB on learner achievement in their study and they found that learners achieve more if IWB is employed in the teaching and learning process.

Classroom management gets easier when numerous activities and various learning materials by the use of IWB create a relaxed learning environment. In addition, learners are immersed in the learning process more actively because IWB contributes to participation, interactivity and motivation of learners.

Literature Review

Zevenbergen & Lerman (2008) suggest that IWB is "an innovation that is gaining considerable presence in many contemporary classrooms" (p. 107) and teaching has become very productive with it. Compared with traditional instruction, technology-based instruction impacts on classroom management which holds an important place in education as it affects the learner achievement. However, IWB is a useful device that can enhance whole-class teaching which has a key factor on classroom management. In a learning environment in which all learners pay attention to what is taught, classroom management can be carried out with ease. Walker (2003) states that IWB impacts on whole-class teaching and facilitates classroom management. For an effective classroom management classroom setting in which learners concentrate on learning materials is indispensable. Thus, the use of a great variety of materials and activities via IWB leads to high concentration, motivation, interactivity and participation. IWB promotes interactive classes (Levy, 2002) hence learners engage in classroom activities, study enthusiastically and stand a better chance of expressing their ideas and thoughts in the classroom. Smith et al. (2006, p. 443) stress the role of IWB on interactive teaching and puts forward that IWB is ''a pedagogic tool for promoting interactive whole class teaching''. Moreover Akbas and Pektas investigated the role of IWB on interactivity and classroom interaction and concluded that (2011, p.4):

Easier comprehension, higher concentration, improved student participation, more effective presentation of information, use of games, aiding memory, and facilitating and provoking thought, Learners are absorbed and empowered, with countless opportunities of IWB in the classroom thus they are enthusiastic to participate and respond. IWB encourages learners to interact actively hence the pace of the class quickens and learners have more exercises and practice in the classroom. Drawing attention of learners is not that easy, however; IWB with its large display area allows teachers to face the students while teaching which infuses learners to interact. A great many presentations can be provided emphasizing the key concepts so that learners have an opportunity to focus on essential elements.

Learners have different learning styles yet IWB offers many varieties for all types of learners. Teacher-centered instruction is not favorable any more by learners so student-centered approach encourages learners to get actively involved in classroom activities. Besides, teaching efficiency is increased in a classroom where IWB is employed.

Method
Design of the Study
This study uses both qualitative and quantitative approaches. Numerical data is used and some conclusions were drawn from the numerical data collected for the study.

The Participants
The participants were randomly selected for the study. Both private and public school lecturers and teachers involved in this study. 100 lecturers who work at different universities, 100 teachers who work at different high schools, and 100 teachers who work at different primary schools; in total 300 participants involved in the study.

Data Collection

The data in this study was accumulated through a questionnaire. The same questionnaire was used for all lecturers and teachers involved in this study. Each participant responded to the same question twice; when they teach using technology-based tools (in particular IWB), and when they teach through traditional instructions. The accumulated data was calculated in percentages for each condition and presented in tables.
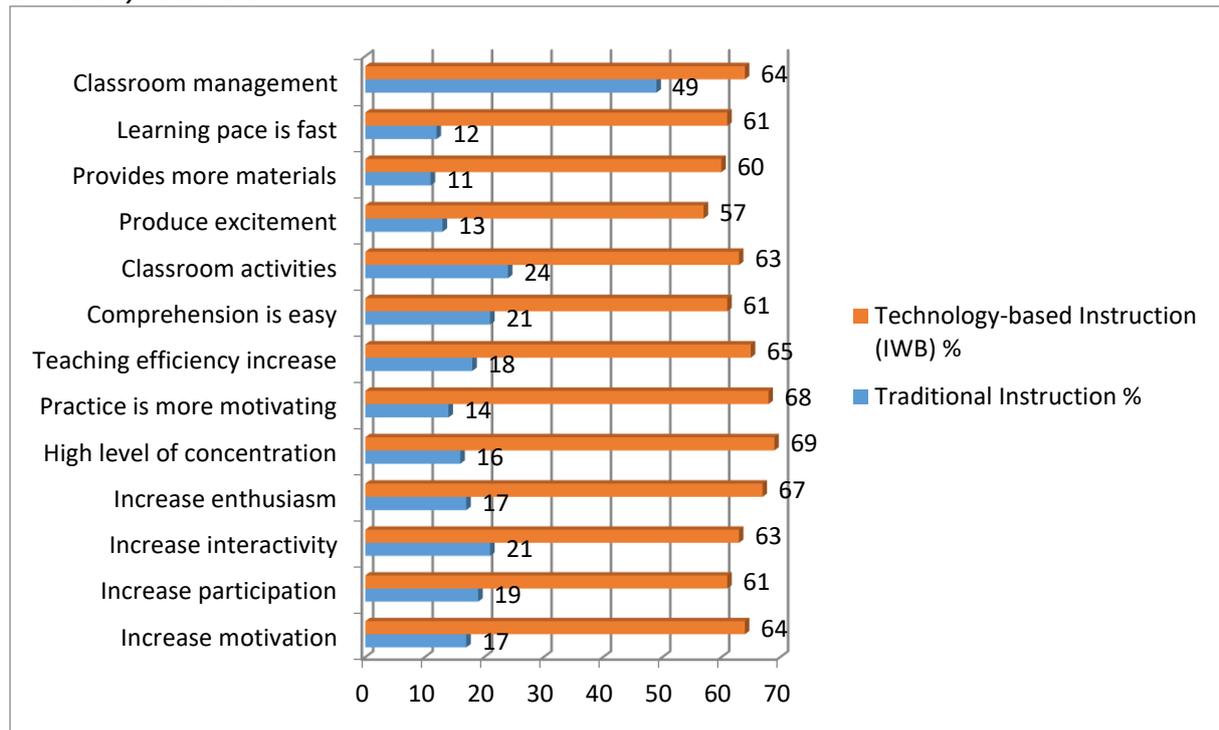
Findings

Table 1

University lecturers

Table 1 shows the questionnaire results of university lecturers. The table indicates that in traditional classroom which excludes technological devices classroom management does not constitute a serious drawback, however; it is seen that classroom management in a classroom which includes IWB is easier. When IWB is used % 64 of the lecturers agree that classroom management is easier, however in a traditional way of teaching % 49 of the same lecturers state that classroom management is easier. The role of IWB on classroom management at university level cannot be underestimated. Though university students are grown up learners the table yields that traditional way of teaching in which all technological devices are removed learners have major problems in terms of interactivity, participation, and motivation. Moreover, the table displays that traditional instruction does not provide excitement and enthusiasm in the classroom, therefore, learners do not concentrate sufficiently in the learning process. As learners are not infused learning, comprehension does not get easy. Finally it can be concluded that traditional instruction does not encourage learners to get effectively involved in the learning process as a result classroom management for lecturers appear as a disadvantage in the classroom. On the other hand, table 1 shows that the use of IWB in the classroom creates opportunities for lecturers for an effective classroom management because the integration of IWB into education is an advantage to reinforce

learning in the classroom. When interactivity, participation and motivation occur in the classroom, learning becomes fun thus classroom management gets easier for lecturers.
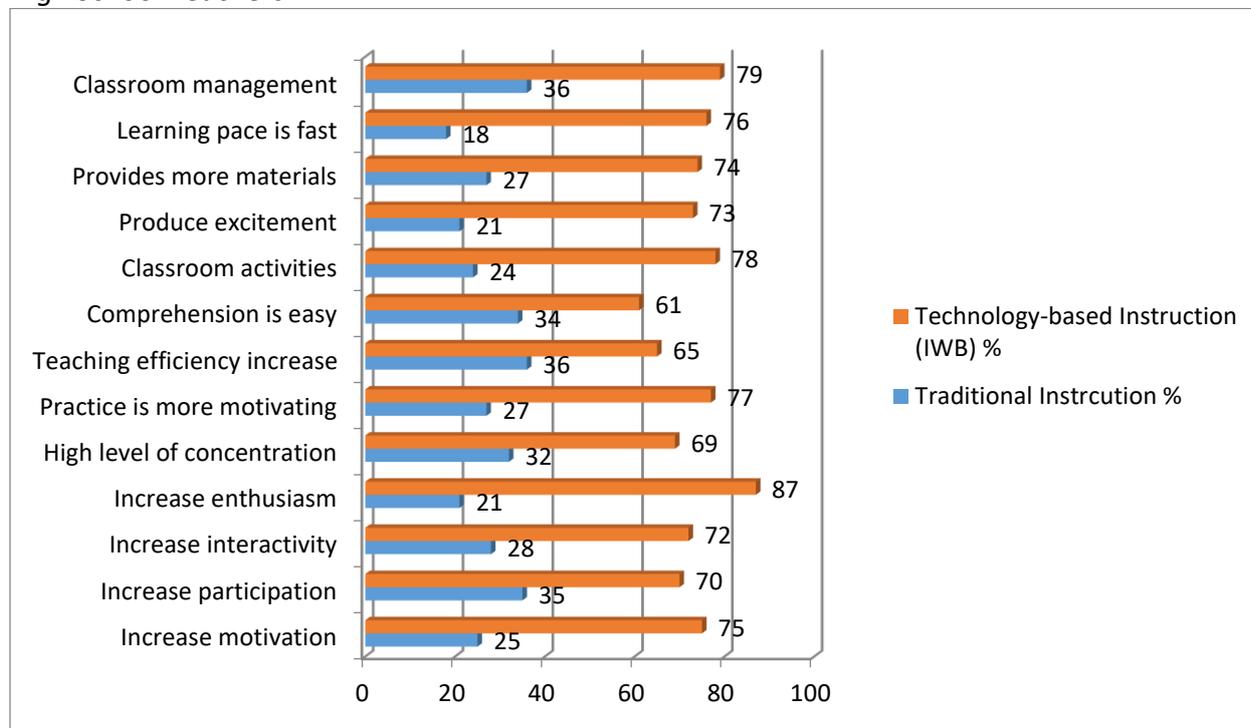
Table 2
High School Teachers

Table 2 shows the questionnaire results of high school teachers. Compared with the questionnaire results conducted on university lecturers, table 2 which indicates the questionnaire results of high school teachers, statistical numbers accumulated are higher in both ways of teaching. However, table 2 produces major differences between traditional instruction and technology-based instruction. When IWB is used % 79 of the teachers agree that classroom management is easier, however in a traditional way of teaching % 36 of the same teachers state that classroom management is easier. The role of IWB on classroom management at high school level is apparent. Traditional instruction does not provide high-school learners sufficient interactivity, participation and motivation to get actively immersed in the learning process. Since learners are not enthusiastic and excited about learning, classroom management appears as a disadvantage in the traditional instruction. On the other hand, the inclusion of IWB into learning settings fosters the learning process. Table 2 indicates that the use of IWB encourages high-school learners for an effective learning for that reason high-school teachers state that classroom management is facilitated when they employ IWB in the classroom.

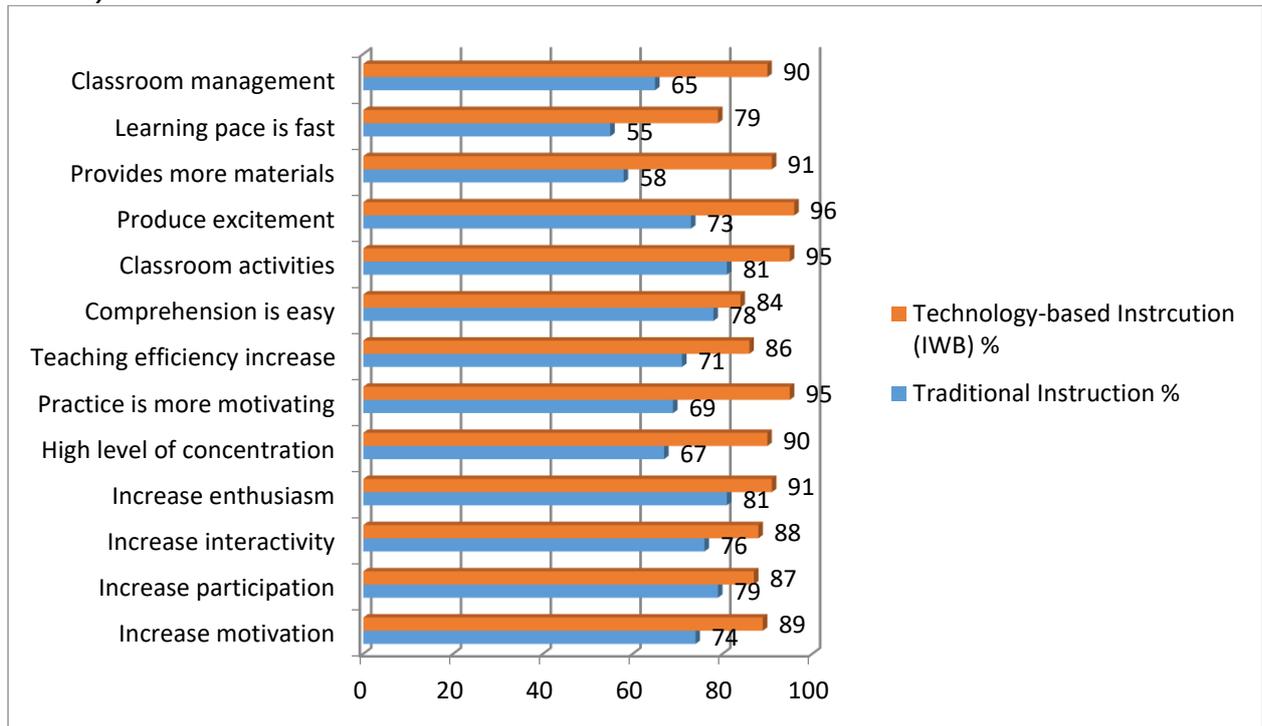Table 3
Primary School Teachers

Table 3 shows there is no great difference between traditional instruction and technology-based instruction with young learners. IWB is used % 90 of the teachers agree that classroom management is easier; however in a traditional way of teaching % 65 of the same teachers state that classroom management is easier. The role of IWB on classroom management at primary school level is clearly seen. However, accumulated data indicates that the use of IWB impacts young learners' interactivity, participation, motivation and enthusiasm more than traditional instruction. Young learners easily comprehend materials by classroom activities created by the use of IWB in the classroom. Though young learners appear as enthusiastic learners in both ways of teaching, technology-based instruction yields more productive learners. When IWB is employed it is seen that young learners are actively involved in the learning process hence primary school teachers stress that the use of IWB affects classroom management.

Table 4
Calculated percentages of IWB contribution to classroom management at different school levels
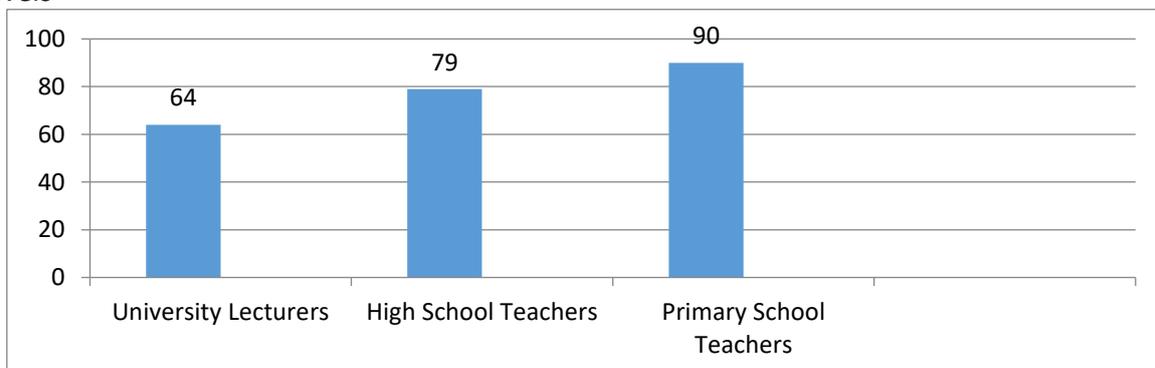
Table 4 indicates that % 64 of lecturers involved in the study is of the opinion that the use of IWB influences classroom management. % 79 of high school teachers believe that the use of IWB contributes to classroom management. Finally, % 90 of primary school teachers state that IWB is a significant factor in the classroom for an effective classroom management.

Discussion and Conclusions

Technology-based instruction influences learning environment in that learners' interactivity, participation, and motivation is promoted. In particular, the integration of IWB into classroom instruction brings about enthusiasm, and excitement which encourages learners for an effective learning. The study revealed that the inclusion of IWB clearly impacts learning environment. The study found that university students, high-school students, and primary school students are all positively affected by IWB. Although the use of IWB in the classroom did not influence all learners in the study equally, its role on interactivity, enthusiasm, motivation, excitement, and participation is clearly seen. Classroom management gets easier when learners are involved in the learning process and IWB has the potential to provide learners required elements which enable them to take part in the learning process effectively.

References

Akbas, O., & Pektas, H. (2011). The effects of using an interactive whiteboard on the academic achievement of university students, *Asia-Pacific Forum on Science Learning and Teaching*, 12(2), 1-19.

Brouse, C. H., Basch, C., & Chow, T. H. (2011). Use and efficiency of various technological methods in the different aspects of teaching and learning a foreign language at 16 universities in New York. *Journal of the Research Center for Educational Technology*, 7(1), 30-39.

Burden, K. (2002). Learning from the bottom up–the contribution of school based practice and research in the effective use of interactive whiteboards for the FE. HE sector. Discussion paper presented at LSDA, Making an Impact Regionally Conference. The Earth Centre, Doncaster. Retrieved from http://ww. lsda. org. uk/files/lsda/regions/8_Bio_KBurde n. pdf.

Dhindsa, H. S., & Emran, S. H. (2006). Use of the interactive whiteboard in constructivist teaching for higher student achievement. Proceedings of the Second Annual Conference for the Middle East Teachers of Science, Mathematics, and Computing (pp. 175-188), Abu Dhabi.

Garrett, N. (2009). Computer-assisted language learning trends and issues revisited: Integrating innovation. *The Modern Language Journal*, 93, 719-740.

Levy, P. (2002). Interactive whiteboards in learning and teaching in two Sheffield schools: A developmental study. Retrieved 23 November 2008, from http://dis.shef.ac.uk/eirg/projects/wboards.htm

O'Dowd, R. (2007). *Online intercultural exchange: an introduction for foreign language teachers.* Clevedon, UK: Multilingual Matters Ltd.

Orr, M. (2008). Learner perceptions of interactive whiteboards in EFL classrooms, *CALL-EJ Online*, 9(2).

Smith, F., Hardman, F., & Higgins, S. (2006). The impact of interactive whiteboards on teacher-pupil interaction in the National Literacy and Numeracy Strategies. *British Educational Research Journal,* 32(3), 443–457.

Soares, A. D. (2010). IWBs as support for technology-related projects in EFL education in Brazil. In M. Thomas & E. C. Schmid (Eds.), Interactive whiteboards for education: Theory, research and practice (pp. 238-250). The United States: IGI Global.Swan, K.; Schenker, J., & Kratcoski, A. (2008). The effects of the use of interactive whiteboards on student achievement. In J. Luca & E. Weippl (Eds.), Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunication (pp. 3290-3297). Chesapeake, VA: AACE.

Walker, D. (2003). White enlightening, Times Educational Supplement, 19.

Zevenbergen, R., & Lerman, S. (2008). Learning environments using interactive whiteboards: New learning spaces or reproduction of old technologies? *Mathematics Education Research Journal,* 20(1), 107 - 125.