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Correlation between behavioural management, instructional management, and the English proficiency level of teachers of English as a foreign language (EFL)

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The study reported on here was aimed at providing statistical evidence on the correlation between instructional management and behaviour management, and how they relate to English proficiency level, gender, age, and years of experience among low proficiency teachers in Indonesia. The data were collected using a behaviour management and instructional management scale developed by Martin and Sass (2010). The data for the English proficiency level were obtained by administering a reading subtest from the sample test of the Preliminary English Test (PET) to 54 English teachers from Aceh, the western-most province in Indonesia. Information regarding age, gender, and years of experience were embedded in the PET. The correlations were analysed by using the Pearson coefficient formula for normal data, the Spearman rank correlation coefficient for non-normal data, and the Independent Sample *T*-test for the analysis of the gender category. The results show that there was a medium positive correlation between instructional management and behaviour management, which was statistically significant (r = .4121, p = .0019). Behavioural management skills were also significantly correlated, but in a negative direction with the level of English proficiency (r = .32, p = 0.018), as were instructional management skills (r = .35, p-value = 0.029). In addition, age was negatively correlated to instructional management skills, and no correlation was found for gender and years of experience.

Keywords: behaviour management; English proficiency; instructional management; low proficiency teachers

Introduction

There is a common belief that behaviour shapes our actions, and the same is true for behaviour management, which determines instructional management among teachers (Woolfolk Hoy & Weinstein, 2006). This belief is also based on what occurs in the teaching and learning process. An in-depth interview in our preliminary study revealed that senior and junior high school English teachers in Indonesia experienced difficulties in practicing good classroom management because many students misbehaved. The students' misbehaviour included a lack of discipline, participation, motivation, and excessive disruption of classes. These misbehaving students also caused social problems in the classroom, and they tended to avoid completing tasks assigned to them by the teacher. According to Van Acker and Talbott (2000:15), students tend to avoid difficult assignments when they do not fully understand the material or tasks. The teachers we interviewed believed that their inability to manage the class and prevent students' misbehaviour was due to their lack of knowledge regarding behavioural and instructional management. They also admitted that their poor behavioural and instructional management skills contributed to low student achievement.

Teachers' behavioural management skills are developed through the process of learning. This developed behavioural management is predicted to contribute to their instructional management skills. Both components are very significant for the success of language learning although Reddy, Fabiano, Dudek and Hsu (2013) have shown that behavioural and instructional management do not correlate to teaching strategies that teachers use in the classroom. However, Rahimi and Asadollahi (2012:53) found that teachers who subscribed to certain behavioural management tended to use more teaching activities in the classroom. In addition, Huth (2015:4) predicts that bad classroom management negatively influences to learning success. Despite differences drawn in the literature regarding behavioural and instructional management skills and how they influence students' learning achievement, we agree that misbehaved students tend to be less successful than well-behaved students as long as the academic achievement is our concern. In addition, a study by Dobbs-Oates, Kaderavek, Guo and Justice (2011) shows that improved behavioural management skills of teachers contribute to better task orientation among their students.

The importance of behavioural and instructional management has been recognized by educators, and teacher training has been conducted to help them provide more effective teaching and learning (Mitchell, Hirn & Lewis, 2017; Reddy, Shernoff, Lekwa, Matthews, Davis & Dudek, 2019). Reddy and Dudek (2014) designed a classroom strategies scale to access teachers' instructional and behavioural management practices. This scale has been used to evaluate teachers in the United States of America (USA) in an effort to improve the teachers' performance. According to Roelofs, Raemaekers and Veenman (1991:209), such training can improve teachers' instructional management skills. As a result, Cooper and Scott (2017:103) conclude that instructional management predicts student success in learning. Although this claim is not based on empirical data, we can predict that it should be true to some extent. Then, the change in students' learning outcomes will change teachers' beliefs and attitude towards the effectiveness of the instructional management strategies which, according to Guskey (2002:383), motivates the teacher to maintain the practices.

Although behavioural management has been qualitatively predicted to influence EFL teachers' instructional management practices, empirical evidence to support the predictions is lacking. In addition, evidence involving low proficiency teachers is even more lacking. It is important to address low proficiency teachers because English in many schools in developing countries such as Indonesia, Thailand, and South Korea is taught by EFL teachers who have low English proficiency. Therefore, this research was intended to statistically analyse the correlation between these two types of management using real data obtained from high school teachers who were mostly at A2 level, based on the Common European Framework of Reference (CEFR) proficiency categorisation. In this research we also analysed how behavioural management and instructional management skills independently correlated to teachers' level of English proficiency. Such correlation has not been explored extensively in second or foreign language teaching. In addition, other variables were also considered, such as gender, years of experience, and age. The research questions used in this study were as follows.

1) Is there any significant correlation between behavioural management and instructional management among low proficiency EFL teachers?
2) Is there any difference in instructional and behavioural management between male and female low proficiency EFL teachers?
3) Is there any significant correlation between behavioural management of low proficiency EFL teachers and their English proficiency level?
4) Is there any significant correlation between instructional management of low proficiency EFL teachers and their English proficiency level?
5) Do age and years of experience affect behavioural and instructional management among low proficiency EFL teachers?

The results of this study are significant for teacher educators in deciding the area of focus in teacher professional and pedagogical development programmes. In addition, the results of this study can be used by academics to improve the substance of the current curriculum in the field of pedagogy.

Literature Review

Behavioural and instructional management

Behavioural management, which was developed about five decades ago, was first an effort to improve employees' performance at work (Luthans & Stajkovic, 1999). The theory of behavioural management derives from reinforcement theory, which is based on the belief that the motivation of human behaviour is a result of the relationship between the environment and the behaviour it affects. Therefore, according to Stajkovic and Luthans (2003:158), managers who subscribe to behavioural management would consider "(a) the occasion upon which desired employee behavior occurs, (b) the behavior itself, and (c) the behavioral consequences." As much as the theory of behavioural management is applicable for organisational purposes, it has been extensively used in other fields such as education (Parsonson, 2012).

In the context of education, behavioural management is defined as the ability exhibited by teachers to provide "clear behavioral expectations" and motivate students to behave appropriately using various techniques (Pianta, La Paro & Hamre, 2008; Ünal & Ünal, 2012:45). Behavioural management has been found to influence education in many ways. Dobbs-Oates et al. (2011:421) found that behavioural management is "a key teaching skill and an important determinant of the preschool classroom environment." Student misbehaviour in school has become a problem in many countries, including developing countries (Reupert & Woodcock, 2011:271), and this condition contributes to low student achievement. Managing a class is particularly challenging for teachers teaching large classes (Segalo & Rambuda, 2018:4). In research conducted by Reupert and Woodcock (2011), preventative strategies were more successful in dealing with student misbehaviour. The strategies included "teaching appropriate behavior, incorporating regular routine, implementing a regular system to deal with transition, changing the seating positions of targeted students, and changing the whole class seating positions."

In general, behaviour management strategies are categorised into four strategies, i.e. behavioural praise, behavioural corrective feedback, proactive methods, and directives (Reddy & Dudek, 2014:81–82). In providing behaviour praise, a teacher provides feedback through verbal or non-verbal cues for students' appropriate behaviour. When such feedback is given for inappropriate behaviour, it is called behavioural corrective feedback. Both strategies are possible with the adequate physical arrangement, which makes it easier for teachers to observe all students. Such practice has been found to lower the possibility of misbehaviour (Cooper & Scott, 2017:105). Afterwards, the inappropriate behaviour can be prevented using verbal and non-verbal strategies, termed as the proactive method. When a student misbehaves, the teacher can direct the student's behaviour. These strategies are used as a template to design assessment for behavioural management strategies.

Another significant type of management in a classroom is instructional management, which has been predicted to correlate with instructional quality (Wang, Haertel & Walbert, 1994) but with a lack of empirical data or statistical support. In addition, instructional management was suggested to be closely related to students' learning outcomes (Cooper & Scott, 2017:103). The term

"instructional management" refers to the teacher's ability to plan and execute an instruction to ensure that students follow the teacher's expectation "to prevent off-task behaviors" (Ünal & Ünal, 2012:45). Ünal and Ünal (2012:53) also claim that teacher's instructional management skills developed better through teaching experience rather than through pre-service teacher training programmes. The teachers' instructional management skills can be observed based on their instructional strategies. Using this method, Reddy et al. (2013:697) found that there was no evidence of a correlation between years of teaching experience and instructional management strategies. Therefore, training on instructional management remains significant for better instructional quality.

Among other scales, Martin and Sass (2010:1126) recently developed a behavioural management scale based on three areas, i.e. "establishing rules, forming a reward structure, and providing opportunities for student input." The scale consists of 12 items with a 6-point response scale ("strongly disagree" to "strongly agree"). They also developed a separate instructional management scale with the same number of items and responses as those for behaviour management. The combined behavioural and instructional management scale (BIMS) was evaluated by Sass, Lopes, Oliveira and Martin (2016) and the results show that only 14 items can be used for research purposes, with six items for each type of management. This scale is popularly used for research purposes after adaptation to a local context, such as in the Czech Republic (Vlčková, Květon, Ježek, Mareš & Lojdová, 2019).

English proficiency of EFL teachers

A good teacher is defined based on how well he or she can deliver the instruction to the students, and to do so a teacher needs to have a good mastery of the subject matter knowledge (Even, 1993:94). The term "subject matter knowledge" refers to the teacher's knowledge of the teaching material and, according to Lee, Capraro and Capraro (2018:76), "it is the basis for teachers' instructional practices in their classroom." Subject matter knowledge for a language teacher is even more significant because teaching a language is regarded as a skill rather than knowledge. Therefore, in English language pedagogy, teacher's subject matter knowledge is often referred to as English proficiency. According to Richards (2015:113), teacher language proficiency is specified as the following competencies:

- acting as a good language model by using good English in the classroom
- explaining and giving instructions in English
- providing examples for English words and grammar and their meanings
- using authentic material with adaptation when necessary
- providing feedback for language that the students produce
- adjusting language level based on students' need
- experimenting with a better teaching method and technique

According to Van Canh and Renandya (2017), to teach English effectively, an English teacher needs to have a good level of English proficiency, and students tend to appreciate more proficient teachers more than their less proficient counterparts. This notion is also shared by Richards (2017). However, many research results show that EFL teachers in countries where English is taught as a foreign or second language did not possess the required level of English proficiency to teach English (Lee, 2015:55; Nel & Müller, 2010; Rahman, 2015:89; Van Canh, 2015:187). This contributes to students' failure of achieving a functional language level after having completed high school (Sukyadi, 2015:130). Since teachers' behavioural and instructional management skills might also have contributed to this failure, the correlation between these skills and the level of language proficiency among low proficiency teachers will provide more in this regard.

Methodology

In this research study we used a quantitative correlational research design. Therefore, the data used to answer the research questions were quantitative data, both numerical and nominal. The null hypothesis to be tested in this study was the following: "The population correlation coefficient is not significantly different from zero." The null hypothesis is rejected at the significance level of 0.05.

Instruments

Two instruments were used in this study. The BIMS was used to measure the teacher's behavioural and instructional management skills. It consists of 14 items with a 6-point response scale from "strongly agree" to "strongly disagree." The scale was originally designed by Martin and Sass (2010) and evaluated by Sass et al. (2016). The questionnaire was translated into Bahasa Indonesia and presented in a different order from the original version. The internal consistency was calculated using Cronbach's alpha where the correlation between the score for each item on the scale and the total score for each observation was calculated, followed by comparing the correlation to the variance for all individual item scores. The internal consistency based on Cronbach's alpha for combined BIMS was 0.77, with 0.62 for the behavioural management subscale (BMS) and 0.75 for the instructional management subscale (IMS). The teachers' English proficiency was measured

using the PET, which is one of the Cambridge English qualifications. For time efficiency, only the reading subtest was used. The reading subtest consists of 35 multiple-choice questions. The PET level is intended to be used for test-takers at B1 level based on the CEFR category, which means that the test-takers can understand and communicate main points and ideas in a context familiar to them. The Cronbach's alpha for PET was 0.78.

Participants

The data were collected from high school teachers in the Aceh province. Fifty-four teachers, 42 (78%) females and 12 (12%) males from all districts of the Aceh province participated in this study. The sample size was considered adequate for a correlational study, according to VanVoorhis and Morgan (2007:48). The teachers' teaching experience ranged between 1 and 20 years. At the time of the data collection, they were participating in a compulsory teacher development training programme funded by the Ministry of Education, following 2 months of distance learning. All teachers interested to participate in the training completed an online registration form, and only teachers who lived in the areas covered by adequate internet bandwidth were selected.

Thus, teachers teaching in rural areas did not attend this training. The Ministry of Education did not require any English proficiency certificate, so it was not one of the selection criteria. The training focused more on pedagogical content knowledge than subject matter content knowledge. The aim of the programme was to improve the quality of instruction, which included curriculum interpretation, lesson planning, material development, media selection, and assessment. Teachers who completed this programme successfully would receive a monthly incentive from the government throughout their teaching careers, thus they were very motivated to complete the programme. Some older teachers who had not completed the training in previous years also participated in the programme. Based on PET scores, 39 (72%) participants were at A2 level, 13 (24%) participants at B1 level, and two (4%) participants at B2 level. Renandya, Hamied and Nurkamto (2018) found similar trends in English proficiency levels of English school teachers in Indonesia. In addition, for a more detailed analysis, the data from the participants with A levels of English proficiency were analysed separately to understand behavioural and instructional management of very low proficiency teachers.

Data Collection

Both BIMS and English proficiency tests were administered online using Google Forms and the participants were instructed to complete them under supervision in the classroom on the same day. The participants were divided into four classes. The BIMS in its entirety was delivered online, while the paper-based PET was distributed to the teachers and they selected the options online. Their scores were immediately shown on their computer or smartphone screens once they completed the PET. They were given 15 minutes to complete the BIMS and 60 minutes for the PET. During the test, they were not allowed to consult their peers, look up words in dictionaries, or pause the test.

Data Analyses

The correlation between the BIMS and English proficiency was calculated using the Pearson correlation formula when the data were normally distributed and the Spearman rank correlation coefficient when the data were not normally distributed. The data distribution was tested by using the Shapiro-Wilk test at the significance level of 0.05. The difference in behavioural and instructional management between male and female teachers was calculated using the Independent Sample *t*-test. The ordinal variables, namely behavioural and instructional management skills, were treated as continuous variables for simplicity in the analysis. This way of treatment was possible for this type of data because the responses had six levels (Merkle, Fan & Zeileis, 2014:570). The significance level used to reject the null hypotheses was 0.05. This small significance level was selected to avoid Type I error, i.e. rejecting a null hypothesis when it is actually true. All calculation was performed using R, an open-source statistical application that allows using codes, making it possible to perform any mathematical calculation and data visualisation.

Results

Descriptive Statistics

Before we analysed the data that we collected, we used the Shapiro-Wilk test to determine whether the data for each continuous variable were normally distributed. The results are presented in Table 1.

Table 1 Descriptive statistics and normal distribution test

	Descriptive statistics					Shapiro-Wilk	
Variables	Min	*Mdn*	Max	*M*	*SD*	W	*p*
BMS	24	36	42	35.67	3.76	0.967	0.136
IMS	17	31	40	30.70	5.08	0.976	0.346
PET score	10	21	35	20.13	5.20	0.981	0.558
Ages*	27.88	35.60	51.37	35.63	4.11	0.970	0.376
Years of experience	1	9	20	8.98	3.29	0.953	0.034

Note. *27.88 = 27 years and 11 months; 35.60 = 35 years and 7 months; 35.63 = 35 years, 7 months and 2 weeks; 4.11 = 4 years, 1 month and 1 week.

Table 1 shows that the data were normally distributed for BIMS and language proficiency, i.e. 0.136, 0.346, and 0.558, which is higher than the significance level of 0.05 ($p > 0.05$). However, the data for years of experience were not normally distributed, and thus the data were transformed using Tukey's Ladder of Powers, which is a powerful data transformation developed by Tukey (1977). The transformation resulted in data normality (W = 0.95873, $p = 0.06048$). Therefore, the Pearson Correlation Formula was used for all pairs. In addition, descriptively the teachers perceived their behavioural management skills to be higher than their instructional management skills based on a four-number summary, i.e. minimum (24 and 17), maximum (42 and 40), median (36 and 31), and mean (35.67 and 30.70).

Results of Correlation Analysis

To test the null hypothesis that "the population correlation coefficient is not significantly different from zero", correlation analyses were performed for each pair, and the results are presented in Table 2.

Table 2 Correlation analysis

Pairs	*t*	*df*	r/r_s	*p*
IM vs BM	3.2620	52	0.4121	0.0019
BM vs PET	-2.4421	52	-0.3208	0.0180
IM vs PET	-1.3179	52	-0.1798	0.1933
Age vs BM	-1.2566	52	-0.1717	0.2145
Age vs IM	-1.8272	52	-0.2456	0.0734
Experience vs BM*	-0.9641	52	-0.1325	0.3394
Experience vs IM*	-1.8817	52	-0.2524	0.0655
Age vs PET	0.7175	52	0.0990	0.4763
Experience vs PET*	0.3358	52	0.0465	0.7383

Note. *The analysis was based on the Spearman rank correlation coefficient (r_s); BM = behaviour management; IM = instructional management.

Table 2 shows that BM was significantly correlated to IM ($r = 0.41$, $p = 0.002$). Behavioural management skills were also moderately correlated to the level of English proficiency in a negative direction, ($r = -0.32$, $p = 0.018$). There was no evidence of a correlation between IM skills and level of English proficiency. A better illustration of these results of correlation analyses is presented in Figure 1.

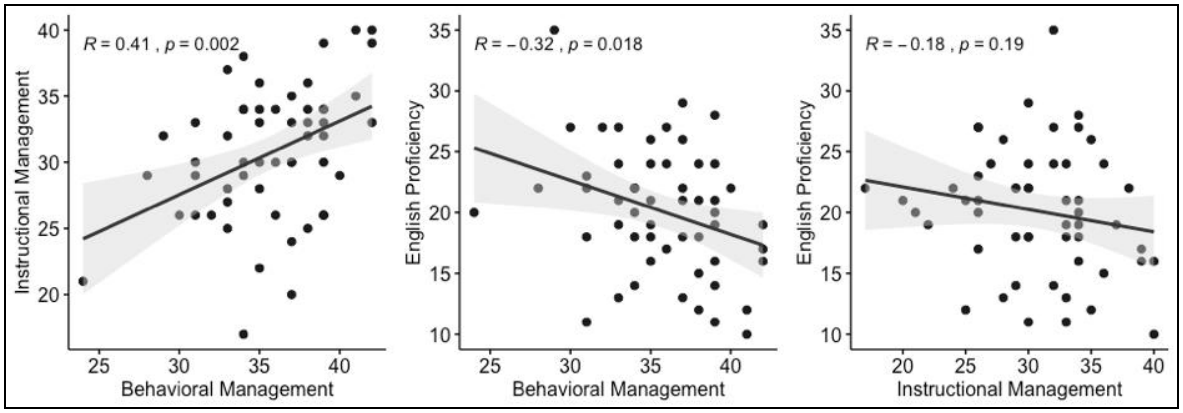

Figure 1 Illustrations of correlation between IM, BM, and PET

Figure 1 shows that all plots exhibit some degree of correlation; however, pair 3 (IM vs English proficiency) does not show any significant correlation. The data points in the plot are very

scattered, showing that correlation is not significant.

The data included in the correlation analysis above were teachers' PET scores consisting of A and B levels based on CEFR. Teachers with an A CEFR level had very low English proficiency. The following analyses only involved 39 teachers with A level of English proficiency. The descriptive statistics and normality test before the analysis are presented in Table 3.

Table 3 Descriptive statistics and normal distribution test for A level teachers

	Descriptive statistics					Shapiro-Wilk	
Variables	Min	*Mdn*	Max	*M*	*SD*	W	*p*
BMS	24	37	42	36.05	3.93	0.947	0.068
IMS	17	30	40	30.69	5.62	0.971	0.399
PET score	10	18	22	17.74	3.66	0.910	0.004
Ages*	28.13	36.17	41.41	35.62	3.50	0.970	0.376
Years of experience	1	9	20	9.23	3.44	0.943	0.048

Note. *28.12 = 28 years, 1 month and 2 weeks; 36.16 = 36 years and 2 months; 41.4 = 41 years and 5 months; 35.62 = 35 years, 7 months and 2 weeks.

Table 3 shows a similar trend as the data summary in Table 1, which includes teachers with B1 and B2 levels of English proficiency, although the minimum figures are slightly higher and maximum ones are lower. In terms of normality level, PET score and years of experience were not normally distributed. The attempt to transform the data was successful for years of experience using Tukey's Ladder of Powers, but PET scores could not be transformed. Therefore, in the analysis involving PET scores as a variable we employed a non-parametric analysis, i.e. the Spearman rank correlation coefficient. Finally, the results of correlation analyses for the data presented in Table 3 are shown in Table 4.

Table 4 Correlation analysis for A level teachers

Pairs	t/S*	*df*	*R*	*p*
IM vs BM	2.5882	37	0.3915	0.0137
BM vs PET	12843*	-	-0.2998	0.0636
IM vs PET	13329*	-	-0.3490	0.0294
Age vs BM	-0.3694	37	-0.0606	0.7139
Age vs IM	-2.0486	37	-0.3191	0.0476
Experience vs BM	-0.7055	37	-0.1152	0.4849
Experience vs IM	-1.8751	37	-0.2945	0.0687
Age vs PET	9003.1	-	0.0888	0.5910
Experience vs PET	8543.4	-	0.1353	0.4116

Note. *t was used for the value of the test statistic for the Pearson correlation, and S was used for the value of the test statistic for the Spearman correlation.

Table 4 shows evidence of a significant correlation between behavioural management and IM (r = 0.39, p = 0.014). A moderate correlation was also observed between IM and English proficiency level (r = 0.35, p = 0.03), and between age and IM (r = 0.32, p = 0.047). No correlation was shown between other pears. The illustration of the correlations is presented in Figure 2.

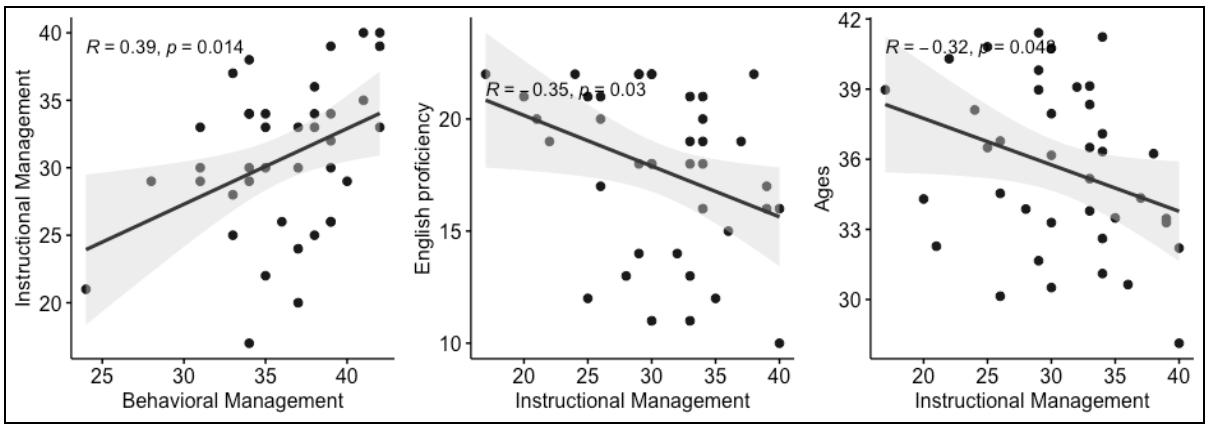

Figure 2 Illustrations of correlation between IM, BM, age and PET among A level English teachers

Based on Figure 2, all plots exhibit some degree of correlation, but the direction of the

correlation in pair 2 (instructional management vs English proficiency) and pair 3 (instructional management and ages) was negative.

Further analysis was conducted using the Independent Sample *t*-test and the Mann-Whitney *U* test by dividing teachers into two categories based on their English proficiency, age, and experience based on the mean, i.e. 21.29, 39 years, and 9 years respectively. Thus, the descriptive statistics and normal distribution were calculated and are presented in Table 5.

Table 5 Descriptive statistics and normal distribution for teachers with different PET

	Descriptive statistics					Shapiro-Wilk	
Variables	Min	*Mdn*	Max	*M*	*SD*	W	*p*
BMS for PET level 1	28	35	40	34.81	3.25	0.9652	0.4814
BMS for PET level 2	24	37	42	36.52	4.09	0.924	0.0483*
IMS for PET level 1	17	30	38	29.48	4.82	0.963	0.4452
IMS for PET level 2	21	33	40	31.93	5.13	0.963	0.4458
BMS for age level 1	29	35	42	36.00	3.00	0.974	0.7317
BMS for age level 2	24	36	42	36.00	4.00	0.945	0.1669
IMS for age level 1	17	30	38	30.00	5.00	0.956	0.3056
IMS for age level 2	20	33	40	32.00	5.00	0.958	0.3450
BMS for exp. level 1	29	35	42	35.00	3.00	0.978	0.7096
BMS for exp. level 2	24	37	42	36.00	5.00	0.916	0.0833
IMS for exp. level 1	17	30	38	30.00	5.00	0.953	0.1514
IMS for exp. level 2	21	33	40	32.00	5.00	0.961	0.5637

Note. * = not normally distributed; exp. = experience.

In Table 5, PET level 1 refers to teachers with PET higher than the mean, and PET level 2 refers to teachers with PET lower than the mean. For age, level 1 denotes older teachers, and exp. level 1 represents teachers with teaching experience longer than average. Based on the tests of normal distribution (Shapiro-Wilk), only one data set was not normally distributed, i.e. BMS for PET level 2 (p-value < 0.05). Therefore, the Mann-Whitney *U* test was used to compare the variables involving teachers with English proficiency lower than the mean score. Table 6 shows the result of the significance test for teachers with different levels of English proficiency.

Table 6 The results of the significance test

Pairs	Mean for L	Mean for H	*t*/*U*	*df*	*p*
BMS based on PET	36.519	34.815	472.5^{U}	N/A	0.0617
BMS based on age	35.815	35.519	0.2869^{t}	48.03	0.7754
BMS based on experience	36.000	35.471	0.4503^{t}	29.59	0.6558
IMS based on PET	31.926	29.482	1.8042^{t}	51.82	0.0770
IMS based on age	31.889	29.518	1.7463^{t}	50.93	0.0868
IMS based on experience	32.100	29.882	1.5125^{t}	35.58	0.1392

Note. L = lower than mean, H = higher than mean, *t* = for *t*-test, *U* = for Mann-Whitney *U* test.

Table 6 shows that there was statistical evidence that behavioural and IM skills were different among teachers with different English proficiency levels at the significance level of 0.1, but not at the significance level of 0.05. In addition, the statistical evidence was also observed in IM between younger and older teachers at the same level of significance.

Behavioural and Instructional Management Based on Gender

To answer the last research question, the behavioural and IM skills of male teachers were compared to those of their female counterparts. The summary of the data and the result of the normality test are presented in Table 7.

Table 7 Descriptive statistics and normal distribution test for all level teachers

	Descriptive statistics					Shapiro-Wilk	
Variables	Min	*Mdn*	Max	*M*	*SD*	W	*p*
BMS – male	29	36.5	42	36.08	3.98	0.973	0.9371
IMS – male	17	32.5	39	30.83	6.18	0.935	0.4424
BMS – female	24	35.5	42	35.55	3.74	0.961	0.1646
IMS – female	20	30	40	30.67	4.81	0.977	0.5587

Table 7 above shows that the difference between male and female teachers was more noticeable in behavioural management skills than that in IM skills. The following analyses show whether these differences were significant or whether they happened by accident. Because all the data were normally distributed (p > 0.05) in the Shapiro-Wilk test, the Independent Sample *t*-test

was used for the significance test, and the results are presented in Table 8.

Table 8 Results of independent sample *t*-test

Pairs	Mean for M	Mean for F	*t*	*df*	*p*
BMS	36.083	5.548	0.4161	16.92	0.6826
IMS	30.833	30.667	0.0862	15.02	0.9324

Note. M = Male; F = Female.

The results of the Independent Sample *t*-test above show that there was no evidence that male teachers and female teachers exhibited different behavioural and IM skills. This is evidence from the acceptance of the null hypotheses based on the *p*-values for each pair ($p > 0.05$).

Predictors of Behavioural and Instructional Management (BIM)

The final analysis was intended to summarize and confirm the variables which predict the levels of behaviour and IM skills among English teachers. The variables included English proficiency level (PET), age, experience, gender, and school level – which represented the students' ages; 12 to 14 years for junior high school level and 15 to 17 years for senior high school level. Another potential predictor included in the analysis was school location, i.e. urban and rural schools. The analysis was performed using a multiple regression analysis, and the results are presented in Table 9.

Table 9 Regression analysis of BIM for all teachers

Effect	Estimate	*SE*	*t*	*p*
Behavioural management				
Intercept	45.330	5.031	9.010	0.0000
PET	-0.213	0.103	-2.066	0.0440
Age	-0.183	0.172	-1.067	0.2915
Experience	-0.004	0.202	-0.019	0.9848
Gender	1.038	1.284	0.809	0.4228
School level	0.471	1.271	0.370	0.7129
School location	1.151	1.204	0.956	0.3441
Intercept^{SRA}				
PET^{SRA}	-0.231	0.095	-2.442	0.0180
Instructional management				
Intercept	39.937	6.895	5.792	0.0000
PET	-0.141	0.141	-0.996	0.3240
Age	-0.158	0.235	-0.670	0.5060
Experience	-0.274	0.277	-0.989	0.3280
Gender	1.019	1.759	0.580	0.5650
School level	1.615	1.742	0.927	0.3590
School location	1.499	1.650	0.909	0.3680
Intercept^{SRA}				
PET^{SRA}	-0.176	0.133	-1.318	0.1930

Note. For behavioural management = Residual standard error: 3.673 on 47 degrees of freedom, Multiple R^2: 0.1545, Adjusted R^2: 0.04655, *F*-statistic: 1.431 on 6 and 47 *df*, *p*: 0.2229, SRA: Simple regression analysis. For IM = Residual standard error: 5.034 on 47 degrees of freedom, Multiple R^2: 0.1302, Adjusted R^2: 0.01914, *F*: 1.172 on 6 and 47 *df*, *p*: 0.3371.

Table 10 Regression analysis of BIM for A level teachers

Effect	Estimate	*SE*	*t*	*p*
Behavioural management				
Intercept	40.773	8.139	5.010	0.0000
PET	-0.269	0.194	-1.386	0.1750
Age	-0.015	0.250	-0.062	0.9510
Experience	-0.068	0.250	-0.272	0.7870
Gender	0.544	1.650	0.330	0.7440
School level	0.710	1.681	0.422	0.6760
School location	1.399	1.419	0.987	0.3310
Intercept^{SRA}				
PET^{SRA}	-0.307	0.169	-1.818	0.0771
Instructional management				
Intercept	52.295	10.929	4.785	0.0000
PET	-0.457	0.261	-1.751	0.0895
Age	-0.366	0.336	-1.090	0.2840
Experience	-0.141	0.336	-0.421	0.6768
Gender	-0.422	2.216	-0.190	0.8502
School level	1.163	2.258	0.515	0.6100
School location	1.057	1.905	0.555	0.5831
Intercept^{SRA}				
PET^{SRA}	-0.534	0.237	-2.255	0.0301

Note. For behavioural management = Residual standard error: 4.021 on 32 degrees of freedom, Multiple R^2: 0.117, Adjusted R^2: -0.04856, *F*-statistic: 0.7067 on 6 and 32 *df*, *p*: 0.6465. For IM = Residual standard error: 5.4 on 32 degrees of freedom, Multiple R^2: 0.224, Adjusted R^2: 0.07852, *F*: 1.54 on 6 and 32 *df*, *p*: 0.1972.

Table 9 indicates that among all teachers there was no collective significant effect between potential predictor variables and behavioural management ($F(6, 47) = 1.431$, $p > 0.1$, $R^2 = 0.154$) or IM ($F(6, 47) = 1.172$, $p > 0.1$, $R^2 = 0.130$). When tested using simple linear regression, there was only one predictor of behavioural management, i.e. English proficiency level ($t = -2.442$, $p = 0.0180$), while none predicted IM. In addition, the results of the multiple regression analysis among teachers with A levels of English proficiency (see Table 10) indicated that there was no collective significant effect between suspected predictors and behavioural management ($F(6, 32) = 0.7067$, $p > 0.1$, $R^2 = 0.117$) or IM ($F(6, 32) = 1.54$, $p > 0.1$, $R^2 = 0.224$). However, simple linear regression analysis results indicated that English proficiency level was a predictor only for instructional management ($t = -2.255$, $p = 0.0301$).

Discussion

The objective of this research was to determine whether there were correlations between behavioural management and IM, between behavioural management and level of English proficiency, and between IM and level of English proficiency. In addition, we also aimed at determining the effect of age, years of experience, and gender on teachers' behavioural management and IM. The analyses were performed on the data of all teachers and to those with an English proficiency level of A2 separately. For the first analysis, the correlations were obtained by using the Pearson Correlation Formula, performed on 54 data points at the significance level of 0.05, because our data were normally distributed based on the results of the Shapiro-Wilk test at the significance level of 0.05. The results show that the correlations were moderate for two pairs, i.e. between behavioural management and IM ($r = 0.41$, $p = 0.002$), and between behavioural management and level of English proficiency ($r = -0.32$, $p = 0.018$). For the second analysis, the Pearson Correlation Formula was also used except for the analysis involving English proficiency level, because the data were not normally distributed. The Spearman rank correlation coefficient was used for non-normally distributed data. The results show that IM and behavioural management were significantly correlated at a moderate level ($r = 0.39$, $p = 0.014$), and the moderate correlations were also observed between English proficiency level and IM ($r = -0.35$, $p = 0.029$) and between age and IM ($r = -0.32$, $p = 0.047$).

The correlation between behavioural management and IM among EFL teachers can initially be predicted qualitatively without empirical data, because according to Woolfolk Hoy and Weinstein (2006), behaviour determines our actions. This prediction is supported by data obtained from teachers in the USA (Martin & Sass, 2010) and in Portugal (Sass et al., 2016) involving teachers without separating their subjects, and the results varied, i.e. 0.22 and 0.46. A study by Cheng and Chen (2018) also found similar result ($r = 0.70$, $p < 0.001$). However, such predictions were not intended to be limited to low proficiency EFL teachers. In this study, a correlation of 41% (for all teachers) and 39% (for teachers with a CEFR levels of lower than B1) with $p < 0.05$ confirms that the correlation between behavioural management and IM was also significant among low proficiency EFL teachers. Because the correlation we obtained in this study does not contradict what Sass et al.

(2016) found, this result suggests that the BIMS can be used to access behavioural management and IM skills among low proficiency language teachers for research purposes.

Correlation in a negative direction between behavioural management and level of English proficiency was unexpected in this study although the correlation was not found among teachers with very low English proficiency level (below B1). The moderate correlation in a negative direction (r = -0.32, p = 0.018) between behavioural management and English proficiency means that the higher the scores that a teacher obtains in the English proficiency test, the lower his/her skills in behavioural management. This negative correlation was also supported by further analysis using the significance test (Independent Sample *t*-Test and Mann-Whitney *U* test), where behavioural management of lower English proficiency teachers was significantly higher than that of higher English proficiency teachers. In addition, regression analysis results also confirm that English proficiency was a predictor of behavioural management. Since the items in the behavioural management questionnaire were not related to English proficiency, the negative correlation does not imply the presence of the Dunning-Kruger effect, i.e. people with a lack of ability to complete a task overestimates their ability. Instead, this result has provided significant information in the field of BM. In addition, there was no evidence of correlation between IM and English proficiency, but the correlation existed among very low English proficiency teachers. This correlation was also backed up with the results of the significance test and the regression analysis. Based on these results, we can conclude that low proficiency teachers do not focus much on the quality of their language instruction, but they tend to focus more on students' behaviour. The absence of correlation between behavioural management and English proficiency, and the fact that English proficiency was not a predictor of behavioural management for very low English proficiency teachers suggests that teachers with an English proficiency level lower than B1 were neither good at behavioural management nor IM. According to Renandya et al. (2018:622), teachers with good English language proficiency have been found to be able "to navigate their lessons more smoothly and efficiently" and provide better support such as giving satisfactory explanations and providing helpful feedback to their students. Therefore, they gain more respect from their students, and thus the students are more motivated to follow the teacher's instruction and less likely to show negative behaviour. Thus, such teachers do not need to pay attention to students' behaviour. On the other hand, low proficiency teachers can be considered less experienced teachers and, according to Hiykel (2017), they used more instructional time to deal with students' misbehaviour. In our study, years of teaching experience were not correlated to either behavioural management or IM based on the correlation analysis, the significance test, or regression analysis. This unexpected result implies that the number of years spent teaching does not guarantee that a teacher can gain more experience. To gain more experience in teaching, teachers need to be able to reflect on what works and what does not work in the classroom and use these to improve their teaching practice, which is possible if the teacher is equipped with good content and pedagogical knowledge. This unexpected result also indicates that many low proficiency EFL teachers stop improving their knowledge, and most likely their practice, of behavioural management and IM after certain years of teaching. This explains the results of a study conducted by Huang and Moon (2009) who found that years of experience was negatively correlated with students' achievement. Our further analyses show that there was a negative correlation between age and IM, which is also in line with the result of the significance test among very low proficiency teachers, suggesting that younger teachers are better at IM than their older counterparts. Geeraerts, Tynjälä and Heikkinen (2018:491) provide an explanation for this result. They state that younger teachers are more enthusiastic to learn to innovate, and they generally receive better pre-service teaching training. Therefore, teachers with a low level of proficiency should be assigned to teach a well-behaved class in order for them to become aware of the need to improve their pedagogical knowledge and English proficiency, because in such classes they would not need to focus on student behaviour, leaving them unneeded if they lack content knowledge.

Regarding IM skills, there was no evidence that teachers' level of English proficiency correlated with their IM skills. In fact, the result of the regression analysis showed that English proficiency level was not a predictor of IM skills. These results are not what we had expected. We expected that teachers with better English proficiency would provide better classroom instruction because they would have more time to plan the instruction. Meanwhile, low proficiency teachers invested more of their time in understanding and preparing teaching materials. In addition, Even (1993:97) predicts that pedagogical subject-matter knowledge, in this case, English proficiency, influences pedagogical content knowledge, which determines IM skills. However, the data confirm that this is not the case. This finding is novel in, or even unique to, the field of English language pedagogy. Therefore, among teachers with A2 and B1 levels of English proficiency, similar IM is practiced regardless of

their English proficiency. This unexpected finding might be explained by the fact that even though levels of English proficiency were different among teachers in the study, the differences were very slim. Hulstijn (2014) agrees that considering two consecutive levels of CEFR should be done with caution because both levels share similarities. Should we have had access to EFL teachers with more varied levels of English proficiency, a better conclusion could have been drawn.

In short, the results of this study provide a significant contribution to the area of behavioural management and IM in relation to English language teaching. English language pedagogists should understand that teachers' focus in their classrooms, be it behavioural management or IM, depends on their English proficiency level. Therefore, teachers' recruitment should be based more on their English proficiency in order to achieve effective language teaching at schools.

Conclusion

The objectives of this research were to determine whether behavioural management, IM, and levels of English proficiency correlated with one another. Using data from low proficiency teachers in the Aceh province of Indonesia, the correlations were analysed statistically using the Pearson Correlation Coefficient, the Independent Sample *t*-test, the Mann-Whitney *U* test, and regression analyses. The research results show correlations between the variables. Firstly, there was evidence of a correlation between behavioural management and IM at a moderate level ($r = 0.41$, $p = 0.002$). Secondly, a significant correlation in a negative direction was also observed between behavioural management and level of English proficiency ($r = -0.32$, $p = 0.018$). Finally, there was no correlation between IM and level of English proficiency. These correlation analysis results were supported by the results of other statistical analyses. Therefore, it can be concluded that English proficiency level does not determine how well a low proficiency English teacher delivers instruction in an EFL classroom.

Based on the results in this study, we would like to make a few suggestions. Firstly, policy makers in education should declare that behavioural management and IM training is obligatory for both in-service and pre-service teachers. This policy can be passed at provincial or district levels to ensure better enforcement. Secondly, it is suggested that training designers at provincial and district levels should not limit the training only to the cognitive level like is the current practice in Indonesia, but it should also address psychomotor levels. Therefore, the teachers will not only know best practices of behavioural management and IM, but they will also experience how it is used in a real classroom. We also suggest that teachers are provided with subject-matter knowledge to improve their level of English proficiency because it was found to be associated with better behavioural and IM skills.

Limitation of the Study and Future Studies

The results of this study, as presented above, have provided significant information for teacher educators. However, it is important to consider some limitations of the study. Firstly, we only focused on the EFL classrooms where students practiced by speaking, in addition to completing exercises. Therefore, speaking to peers might be seen as proper behaviour in this type of class. Therefore, the results might not apply to science classes, for example. Secondly, in our study most teachers were at A2 level, i.e. having the ability to communicate only within a limited range of contexts, which is a very low English proficiency level for a teacher. The results of the study might have been different if teachers with more varied levels of English proficiency participated in the study. Thirdly, teachers who participated in the research were those living and most likely teaching in urban or semi-urban areas. The results of the study do not include teachers teaching in rural schools, as such teachers were not included in the study. Fourthly, the internal consistencies exhibited by the current BIMS was not very high, especially for the BM subscale, i.e. 0.62 based on Cronbach's alpha. With a better scale, the results of the study might have been different, and hopefully a clearer correlation could be observed. In addition, the sample size met VanVoorhis and Morgan's (2007:48) requirements, but the sample size only met the minimum requirement. A larger sample size could have resulted in more confident results. Sass et al. (2016:288), who constructed the behaviour and IM scale, believe that it is significant to investigate how the scale predicts students' achievement. However, we did not consider this important variable. Future experimental research could answer this question through a repeated measures design involving teachers who had complete BIMSs. Finally, we found a negative significant correlation between IM skills and English proficiency level among very low proficiency English teachers. Although there is a possibility that this negative correlation can be explained by the Dunning–Kruger effect, i.e. teachers with low ability tend to overestimate their ability, we cannot, because items in the BIM questionnaire are not related to English language proficiency. Thus, this unexpected result cannot yet be explained without further in-depth qualitative study, which is strongly suggested for future research.

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Authors' Contributions

Burhanuddin Yasin conceptualised the topic of the research and collected data for the research. Faisal Mustafa analysed the data, wrote the draft and revised the manuscript. Both authors reviewed the final version of the manuscript.

Notes

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