Students' Age at which EFL is Introduced in Schools and Educational Outcomes

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Abstract: To see the relationship between the age at which EFL is introduced in some Indonesian public schools and student outcomes a survey involving 229 students both from elementary and junior high schools in Palembang is conducted. These students are given the test comprising vocabulary, reading comprehension, and grammar. It is hypothesized that those who start learning English earlier have better achievement. Factors such as school and home environments are also considered in the analysis. Stepwise regression analysis is applied to identify which variable contributes to students' outcomes. The results show that there is no correlation between age alone and the students' EFL achievement. However, significant influence is found when teacher education level and teacher ELT experience are added to the prediction model predicting EFL achievement from age.

Keywords: age, EFL learning, elementary and junior high schools, ELT experience, socio economis status, student achievement, education level.

Many researchers in applied linguistics assert that there is a relationship between the age of language learners and their achievement. It is said that the younger the foreign language learners are the better chance they would learn the target language, especially in terms of accent and pronunciation. Older learners (at puberty or older) are faster learners in

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grammar compared to children. As older learners are keen in analyzing word formation and structural patterns, children or younger learners are more motivated, very keen in imitating accent and pronunciation. This study was aimed at finding out the relationship between the school condition and the government policy of offering English as a local content, beginning from the fourth grade in some elementary schools. The existence of the relationship between the two variables is seen in terms of students' vocabulary, oral reading comprehension, and grammar achievements in relation to educational processes and learning environment.

Differential success in foreign language learning may be caused by several factors, such as, age (d'Anglejan, 1990), language aptitude (McLaughlin, 1990), attitudes and motivation (McGroarty, 1996), socialpsychological factors (Freeman & McElhinny, 1996; Rickford, 1996), personality, cognitive style, hemisphere specialization (Larsen-Freeman & Long, 1991), parents' education (Zakiya, 2002), learning strategies (Ihsan & Diem, 1997), and gender (Freeman & McElhinny, 1996). This present study mainly tries to focus on one of the factors, that is, age of the learners at which they firstly learn English as a foreign language. In second language acquisition or foreign language learning, learners begin acquiring the language at a later age than do first language learners. All children with normal faculties within normal circumstances master their mother tongue at the age of four but not all older children can acquire a second language or learn a foreign language without struggle and without limited success. In other words, age is one of the factors that relates to the degree of one's success in second language acquisition or foreign language learning. Singleton (1999) states that most if not all aspects, including lexicons, of L2 acquisition, are affected by the age factor. With respect to the development of English literacy, d'Anglejan (1990) found that those of age 6-7 made more rapid progress in English reading that is initiated at that level. This statement supports what Krashen et al. (1979), Lightbown and Spada (1994), and Harley et al. (1995) have concluded based on their research that age is a significant factor influencing one's learning achievement. They assert that older is faster, but younger is better.

Furthermore, following the Critical Period Hypothesis or Sensitive Period Hypothesis, according to Gass and Selinker (2001), there is "an age-related point (generally puberty) beyond which it becomes difficult or impossible to learn a second language to the same degree as native speakers (NS) of that language". However, not all researchers agree with

this view. Related to this statement, this study is intended to give more evidence whether or not that age is one of the crucial factors determining or influencing students' achievement in foreign language (FL) learning, especially in their receptive skill, such as reading. Therefore, based on the background above, it is hypothesized that there is a significant correlation between students' age at which EFL is introduced in Indonesian schools and their English achievement.

METHOD

The major purpose of the study was to see whether students' age is statistically related to their English outcomes. Therefore, data for this study were obtained by using measures designed for and used with students at their level. A secondary purpose of the study was to see whether the addition of some other factors, especially, teacher education level, years of ELT experience, and students' socio-economic-status (parents' occupation), assuming that class size and student's gender in each level of education are somewhat the same, to the prediction model predicting EFL achievement variable from age resulted in a significant increase in the explained variation for student achievement in learning EFL. Another purpose of the investigation was to subjectively compare the resulting prediction models for the population comprising two groups of students who started learning English at 10 and at 13 years of age. In other words, the 5th graders are at the age of 11, and the 8th graders are at 14 as it is generally true that the first graders start at the age of 7.

The population from which the sample was drawn for this study consisted of a selected group of students who had learned English for more or less 2 years either at elementary or junior high schools in Palembang. Specifically, subjects chosen for the sample were those who never took any English courses other than what they have in class at their schools following the curriculum suggested. Prior to the collection of data, the principal of each school was contacted and only those who agreed to their school participation were included in the study. Students of those schools were asked to do a set of English test comprising vocabulary (36 items), reading comprehension (23 items), and grammar (7 items) to measure their English achievement. This test was tried out to 189 fifth graders and eighth graders of several other schools in Palembang and the result shows that the reliability of the test is 78.

The reason for including only three components of English in the test is that children learn English through firstly listening to adults reading stories to them, then reading by themselves, followed by vocabulary development and not too much of grammar (Read also Dixon-Krauss, 2001). According to Cooper et al (1988) it is from oral language base that students develop their ability to use the written symbols in reading. Oral language is clearly the foundation on which all reading is built. Why not much of grammar? Halliwell (1992) said that at the primary school level the children's capacity for conscious learning of forms and grammatical patterns is still relatively undeveloped.

Assuming that such variables as class size and gender were the same except age, the same test was given to both groups in order to find out whether difference in age would result in different EFL outcomes. However, since the quality of students may also vary based on the quality of the schools and the background of the students, the school and home environments were identified through the school records, the parents' records, interviews with the teachers, and were considered quantitatively and qualitatively in the analysis.

In relation to the educational processes the followings need explanation.

- (a) *The curriculum*. English as a foreign language at the elementary schools is taught using the curriculum of the provincial Department of National Education (1996) designed as the local content. At the junior high school the curriculum is formally designed for EFL as a compulsory subject tested at the National Final Examination.
- (b) *Intensity of instruction*. At the elementary level, English is only taught for two hours a week while at the junior high school, it is taught for four hours.
- (c) Teacher Education Level and ELT Experience. There were three teachers involved in teaching the sample students of the junior high school. They were all permanent teachers and had become civil servants. One of them graduated from Old D₂ Program (2-year program of higher education) and has taught for 10 years; one graduated from Old D₃ Program (3-year program of higher education) and has taught for 12 years; and the other one graduated from S₁ PGSM Crash Program (4-year program of higher education) and has taught for 15 years. Meanwhile, there were two elementary schools involved in the study. In one of the schools, none of the teachers were permanent teachers. They were all sixth-semester-

(equals to D-3 graduates) student teachers from the teacher's college of 4-year program of higher education. They teamteach in a group of four for sixteen meetings at the school as their teaching practicum during the semester. Each semester, 16 student teachers do their practice teaching at this school and take turns teaching both the fifth and the sixth graders. In the other elementary school, the teacher graduated from S_1 Program but has not been a civil servant teacher yet. This teacher has only taught EFL for 1.5 years.

(d) *Class size*. At the elementary school, four classes were involved and the number of the students in each class ranged from 35 to 40 while at the junior high school there were five classes involved in the study and the size of each class was around 36 to 45.

In terms of the background of the students, the following information is presented.

- (a) *Parents' Occupation*. The socio-economic status of the students was only indicated by their parents' occupation, especially the father. The parents of the elementary school students had the following occupation: 7 (6.03%) farmers, 49 (42.24%) blue-color workers of the factory, 12 (10.34%) public servants, 17 (14.66%) salesmen or traveling merchants, 19 (16.38%) workers in the area of services, and 12 (10.34%) private taxi drivers. From the junior high school, there were 4 (3.53%) soldiers, 7 (6.2%) public servants, 6 (5.31%) private taxi drivers, 24 (21.24%) bricklayers, 31 (27.43%) maids, 12 (10.62%) pedicab riders, and 29 (25.66%) middle scale businessmen.
- (b) *Gender*. There were 103 boys (57 from elementary schools; 46 from junior high schools) and 126 girls (59 from elementary schools and 67 from junior high schools) involved in the study.

To assess the relations among the variables, the data were firstly analyzed using Pearson Correlation. Next, to see which variable had the most dominant correlation with students' achievement stepwise regression analyses were used. Then the hypotheses were tested applying associated F-statistics using an alpha level of 0.05.

RESULTS

Because the primary independent variable of the study was age, the first influential factor on the dependent variable to see was **age** by controlling other factors that might influence achievement, such as teacher education level, teacher ELT experience, and parents' occupation.

Table 1 Summaries of Students' Achievement Means Based on Students' Age

Variable	Frequency	Mean	Standard Deviation
11 years	116	44.89	15.07
14 years	113	44.73	8.87

Table 2 Summaries of Students' Achievement Means Based on Teacher-Education Level

No	Educational Outcomes	Education Level of the Teachers	Mean	SD
1.	Total EFL	(8.54
	Achievement	Student Teachers and or D-3 (3-Year College) Graduates	50.65	10.24
		S-1 (Senior College) Graduates	36.95	11.49
2.	Vocabulary	D-2 (Two-Year College) Graduates	24.95	5.26
Achievement	Student Teachers and or D-3 (3-Year College) Graduates	27.19	5.13	
		S-1 (Senior College) Graduates	20.45	6.32
3.	Reading Com-	D-2 (Two-Year College) Graduates	13.86	2.24
	prehension Achievement	Student Teachers and or D-3 (3-Year College) graduates	17.18	4.60
		S-1 (Senior College) Graduates	11.42	4.50
4.	Grammar	D-2 (Two-Year College) Graduates	5.52	3.46
	Achievement	Student Teachers and or D-3 (3-Year College) Graduates	6.28	1.62
		S-1 (Senior College) Graduates	5.08	2.57

Since home environment is also considered in the analysis, it is also interesting to see that there was a negative significant correlation between the occupation of the students parents and their achievement (r = -0.192; p < 0.004). As seen in Table 4, it was found that children of blue color workers were on the first rank in the achievement followed by children of

farmers, pedicab riders, soldiers, servants, bricklayers, public servants, businessmen, private sector workers, drivers, and traveling salesperson.

Table 3 Summaries of Students' Achievement Means Based on Teachers' ELT Experience

Teachers' ELT Experience	Number of Students Taught	Mean	Standard Deviation
6 months	70	53.86	09.51
18 months	46	31.24	11.24
120 months	21	44.33	08.54
144 months	50	46.16	09.58
180 months	42	43.21	08.05

Table 4 Means of Students' Achievement Based on Parents' Occupation

Students' Occupations	Frequency	Mean	Standard Deviation
Blue-color workers	49	56.63	6.31
Farmers	7	55.46	3.15
Pedicab riders	12	50.75	7.69
Maids	31	45.42	8.93
Bricklayers	24	44.79	6.39
Soldiers	4	45.76	12.61
Public servants	19	43.95	11.01
Middle Scale Businessmen	29	43.34	9.66
Private Drivers	18	33.00	13.14
Workers in Service Area	19	32.00	10.56
Traveling Salespersons	17	31.12	10.64

Based on the analysis, it was found that there was no significant statistical correlation between age alone and students' EFL achievement

(R = -0.007 with p < 0.461), although in terms of means, the total achievement of those who started earlier in EFL learning was a little bit higher (Mean = 44.89; SD = 15.07) than that of older learners (Mean = 44.73; SD = 8.87). Neither is significant correlation found between the teacher ELT experience alone and students' EFL achievement (R = -0.053).

Table 5 Summaries of Students' Achievement Means Based on Students' Gender

Variable	Frequency	Mean	Standard Deviation
Male	103	45.70	12.16
Female	126	44.08	12.56

There was a negative significant correlation between teacher-education level and their students' total achievement (R = -0,448 with p < 0,000) and between SES (parents' occupation) and students' achievement (R = -0,192 with p<0,002). There was also a significant correlation between teacher education level and students' achievement in each component of EFL. For example, there is a significant correlation between teacher education and students' vocabulary (R = -0,212; p < 0.001), reading comprehension (R = -0,354; p < 0.000), and grammar (R = -0,156; p < 0.01) respectively.

Furthermore, using the crosstabulation of the variables and sub variables, it is interesting to note that those who were taught by the sixth-semester-student teachers and or D3 graduates got the highest in their total achievement, that is, 52.4% as compared to those who were taught by S1-graduate teachers, 38.4%, and those who were taught by D2 graduate teachers, which was only 9.2%.

From the language components, those who are taught by the sixth-semester-student teachers and or D-3 graduates got the highest scores of all in *vocabulary* achievement (51.5% of them got the score of 25+compared to 34.1% obtained by S1 graduate teachers' students and 9.2% by D2 graduate teachers' students). In *reading*, 39.3% of the students taught by student teachers and or D-3 graduate teachers got the score of 15+ as compared to 39.3% obtained by S-1 graduate teachers' students and 3.5% by D2 graduate teachers' students. The same is true for *grammar* achievement. Those who were taught by the sixth-semester-

student teachers and or D-3 graduates got the highest scores of all in which 47.2% of them got the score of 5+ compared to 25.8% obtained by S-1 graduate teachers' students and 6.1% by D-2 graduate teachers' students.

Furthermore, in terms of teacher ELT experience, the result of the crosstabulation analysis shows that the highest total achievement was obtained by those who had 6-month teaching experience (30.6%), followed by 144 months (21.8%), 18 months (20.1%), 180 months (18.3%), and 120-month experience (9.2%).

In terms of the language components, based on the experience of the teachers the highest achievement in *vocabulary* (25+) was achieved by the students taught by the teachers with 6-month experience (31.8%), followed by those with 144 (22.6%), 180 (19.4%), 18 (16.6%), and 120-month experience (9.7%).

In the field of *oral reading comprehension*, the highest score (15+) was achieved by the students taught by the teachers with 6-month experience (27.5%), followed by those with 144 (22.5%), by those with 180 (15.8%), by those with 120 (6.7%), and by those with 18-month experience (2.5%).

Finally, in terms of *grammar*, the highest score (5+) was achieved by the students taught by the teachers with 6-month experience (38.1%), followed by those with 144 (21.5%), 180 (17.7%), 18-month experience (14.9%), and 120-month experience (7.7%).

After the regression model is formed, by including the four independent variables, it is found that SES (parents' occupation) was highly correlated with age (R = -0.860). However, while the other three variables were all significantly correlated with students' achievement the partial correlation between parents' occupation and achievement is not high enough for parents' occupation to be included in the last model (R = -0.074) as compared with the others, such as with teacher education the R is -0.414, with teacher experience the R is 0.270, and with age the R is -0.235. Thus, by using stepwise regression analysis the precise model appears with the partial correlation of each independent variable as presented in Table 6.

In the selected model, after some factors that might influence the achievement were controlled, the partial correlation between each independent variable and the dependent variable was higher. For example, the correlation between teacher education level and students' achievement was R = -0.621, age and students' achievement was R = 0.511, and

teacher ELT experience and students' achievement was R = -0.513 (See Table 7).

Table 6 Summary Statistics of Correlation Coefficients Between Independent and Dependent Variables

	Correlations			Collinearity Statistics		
Model	Zero Order	Partial	Part	Tolerance	VIF	
1 (constant)						
Ed. Level	-0.448	-0.414	-0.348	0.078	12.757	
Parents' Occupat.	-0.192	-0.074	-0.057	0.095	10.491	
ELT Exp.	-0.053	0.270	0.215	0.003	315.760	
Age	-0.007	-0.235	-0.185	0.002	400.048	
2. (constant)						
Ed. Level	-0.448	-0.621	-0.607	0.188	5.308	
ELT Exp.	-0.053	0.511	0.456	0.010	103.852	
Age	-0.007	-0.513	-0.459	0.010	104.151	

Table 7 Model Summary of the Contribution of Independent Variables on Students' EFL Achievement

Model	R	\mathbb{R}^2	Sig.
1 Education Level	0.448	0.201	0.000
2 Ed. Level + Parents' Occupation	0.522	0.273	0.000
3 Ed. Level. + Parents' Occupation + Teacher	0.617	0.381	0.000
ELT Experience			
4 Ed. Level. + Parents' Occupation + ELT	0.644	0.415	0.000
Experience + Age			
5 Ed. Level + ELT Experience + Age	0.642	0.412	0.000

Teacher education level alone and parents' occupation alone had significant correlation with student achievement, R = -0.448, R^2 = 0.201, p < 0.000 and R = -0.192, R^2 = 0.037, p < 0.004 respectively. When these two factors were combined, the correlation increased into R = 0.552, R^2 = 0.273, p < 0.000. After that, when ELT experience was added to these two factors, the correlation increased into R = 0.617, R^2 = 0.381, p < 0.000. Finally when these three factors were combined with age, there was a little increase in explained variation in the achievement of the

students, $R^2 = 0.644$, $R^2 = 0.415$, p < 0.000. The contribution of each variable or the combination of variables on the achiement can be seen in Table 7.

Using the following model: $y = a + b_1x_1 + b_2x_2 + b_3x_3 + e$ the results of the regression coefficients are presented in Table 8.

Table 8 Summary Statistics of the Regression Coefficients of the Variables

Independent	Unstandardized Coefficients		Standardized	Т	Sig.
variable	В	SE	Coefficients		
(constant)	712.794	66.153		10.775	0.000
Teacher Ed. Level	-15.968	1.345	-1.399	-11.871	0.000
ELT Exp.	.786	.088	4.642	8.908	0.000
Age	-38.563	4.298	-4.682	-8.972	0.000

R = 0.642

R2 = 0.412

F = 52.466

Sig. 0.000

DISCUSSION

Since the students come from different level of education (Elementary Education vs. Junior High School Education), one would expect that there would be a difference in achievement of the students in terms of age (11 vs. 14 in which older students must have been better) at which English is introduced, intensity of instruction (2 hours vs. 4 hours), curriculum (local content which focuses on only vocabulary and oral reading vs. compulsory subject which focuses on the four skills of English including vocabulary and grammar). But the fact shows no correlations found between age and those variables. This may be caused by the heterogeneity in age of the two groups of the students, that is, only age 11 and age 14. However, by having no difference in achievement between those who start earlier but with less hours and those who start later but with more hours of time spent learning, the study has showed that the younger the students start learning a foreign language, the better the achievement will be.

Then, the negative significant correlation between teacher education level and the English achievement of the students needs explanation. If education reflects the quality of the teacher, then its correlation and influence on the success of the children should be positive. The plausible reason for this is that there are two types of

teachers—those who are permanent teachers and have been teaching for quite a long time and those who are still students in the sixth semester of S1 program who only have ELT experience for more or less 6 months. Therefore, there is a possibility that older teachers are somewhat "worn out" so that they are not creative any more and not well prepared when teaching. They may not keep up with the new development in their field either, especially in the new methods and techniques of TEFL. Meanwhile, the younger teachers are those who are still fresh and are still very eager to apply new methods and techniques they have just learned from English for young learners (EYL) class and use those with various materials and visual aids to make their teaching and learning process more interesting. This means that having higher level of education and having more years in ELT experience do not necessarily result in skilled teachers and eventually successful learners if the teachers do not brush up with their knowledge and skills in their field.

The same is true for the mean difference among the students' achievement based on their socio-economic status. It seems that those who come from the lower class got higher achievement than those who are in the middle class status (see Table 4).

CONCLUSSIONS AND SUGGESTIONS Conclussions

Based on the findings and discussion above, it can be concluded that (1) children who start earlier in EFL learning is better in EFL achievement than older learners. This is in line with Krashen et al (1979) finding that age is a significant factor to consider in one's EFL learning. However, young in age only will not be enough to make a difference in one's learning. EFL young learners should have ELT teachers who are educated, experienced in EYL and are most importantly innovative; (2) success in ELT cannot be judged only by the teacher education level and years of teaching experience but also from the actual process of teaching and learning in the classroom, that is the motivation, innovation, and creativity of the teachers themselves in teaching; various and new sources and media are important to make learning interesting; (3) success of the students in EFL learning is not merely determined by the affluence of their parents. When the students are treated equally, together with teacher's enthusiasm in their teaching-learning process, there might be a more significant difference in one's learning.

Suggestions

The results of the present study will have some implications to the theory, policy, and practice of the English language teaching (ELT) in Indonesia. At least, the findings could be used as a recommendation to the Department of National Education in the way of how to deal with the ELT programs in Indonesian schools. In terms of the theory of English language teaching (ELT), the finding of this study can give more support to the theory of English language teaching in that the early age serves as a decisive factor that makes the foreign language learning successful. In other words, elementary pupils are better second language acquirers or foreign language learners compared to the older learners.

In terms of the policy of ELT, the findings of this study can be used as a new consideration to make the English subject that has been taught to the fourth graders compulsory and or even make it exposed from the first grade of Elementary Schools. This means that it should be officially stated in the national curriculum as a compulsory subject. Although in general the analysis does not prove significant difference of the achievement of both groups of the students, still in terms of reading comprehension, 5^{th} graders (mean = 14.72) are better than those of 8^{th} graders (mean = 14.30) with an F = 39.715, p <. 01. Also in terms of grammar, although there is no significant difference, the mean score obtained by the 5^{th} graders (mean = 5.75) is higher than that of the 8^{th} graders (mean = 5.58).

Therefore, this study can enhance the more intense practice of English at schools and among children. In addition, it is advisable if the teachers of English always keep up with the new developments of ELT by participating in the workshops or seminars. However, in order to obtain more plausible results, further research must be done by including more schools (private and state schools) and all the four skills—listening, speaking, reading, and writing and adding grammar, vocabulary and pronunciation to them. The research may focus on topics, functions, and notions, describing language in terms of how it is used in communication rather than seeing it as a linguistic system or a set of skills.

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