English Teaching in Elementary School: Parents' Expectation and Reality

Agustinus Ngadiman
Davy Budiono

Abstract. The need for the teaching of English as a foreign language in Indonesia has been felt by almost all levels of society, especially in big cities. Without realizing the schools readiness, society has put a great expectation on the success of the English teaching. Theories on Second Language Acquisition suggest that a foreign language should be taught to children of young age because every individual possesses a language Acquisition Device, regardless of the age (Chomsky, 1962). Lanneberg (Krashen, 1988: 72) claimed that children are biologically capable to learn a language easily due to the elasticity nature of their brain. This elasticity will stop once the lateralization process takes place in a time when children usually begin to enter their puberty period. In accordance to the 1994 National Curriculum, English has been formally introduced to students of Elementary School. Now, at the dawn of the implementation of competence Based Curriculum, elementary schools are reformulating their English syllabuses and materials to respond to parents' expectations. This paper intends to describe these expectations along with what the schools have done to respond these expectations based on a survey conducted on a number of elementary schools in Surabaya. Furthermore, the paper will also try to verify whether these expectations are realistic or not and suggest several achievement indicators that are in line with these realistic expectations.

Introduction

Theories on Second Language Acquisition suggest that a foreign language should be taught to children of young age because every individual possesses a language Acquisition Device, regardless of the age (Chomsky, 1962). Lanneberg (Krashen, 1988: 72) claimed that children are biologically capable to learn a language easily due to the elasticity nature of their brain. This elasticity will stop once the lateralization process takes place in a time when children usually begin to enter their puberty period. In accordance to the 1994 National Curriculum, English has been formally introduced to students of Elementary School. Now, at the dawn of the implementation of competence Based Curriculum, elementary schools are reformulating their English syllabuses and materials to respond to parents' expectations.

This paper intends to describe these expectations along with what the schools have done to respond these expectations based on a survey conducted on a number of elementary schools in Surabaya. Furthermore, the paper will also try to verify whether these expectations are realistic or

not and suggest several achievement indicators that are in line with these realistic expectations.

Research Methodology

To obtain the data needed in this study, 250 questionnaires were parents of private and state elementary school students. 50 questionnaires were also sent to Teachers of English in private and state elementary schools in Surabaya. However, only 85 parent respondents returned the questionnaires. And only 8 teachers respondents returned type questionnaires. Thus there were only 85 questionnaires from parent and 8 teacher respondents analyzed To get further information, informal interviews with some English teachers and parents were also conducted. The educational background of the parent respondents also varies from the elementary school to the graduate school. Stratified random sampling based on the educational background of the respondents was then used to determine the parent respondents. The educational background of the parent respondents returning the questionnaire is described in a more detail division as follows:

Table 1
Parent Respondents' Educational Background

Educational Background	Abbreviation	Number
Elementary School Up to Senior Secondary School	ES-SSS	41
Diploma-graduate	D-3-S1	39
Master-doctorate	S2/3	13
Total number		**85**

The data were the responses of the questionnaires distributed to th respondents. In the descriptive study, the analysis of the data was done by counting the percentage of respondents answering each item of the questions. The result of the calculation is the basis to answer the research questions.

The Results

The questionnaires returned by parent and teacher respondents yield the following results.

Parents Expectation

The Need of English to be Introduced to Elementary School Students

The study reveals that 98.82 of parent respondents stated that children need to learn English in Elementary school for the following reasons.

(1) It is the right time for the children to learn English in Elementary school. 43.90% of the ES/SSS, 58.62% of the C-S1, and 41.47 of the S-2/3 respondents state that English should be introduced to children in early stage.
(2) By learning English in Elementary school children can broaden their insight. 41.46% of the ES/SSS and 34.48% of the C/S-1 and 50.00% of the S-2/3 parent respondents state that to broaden their insight children need to learn English as early as possible.
(3) English is needed for studying abroad. 2.20% of the Es/SSS, 4.90% of the C/S-1 and 8.33% of the S-2/3 parent respondents state that learning English in elementary school is a good preparation to study abroad.

Only 1.18 of parent respondents stated that it is not necessary for their children to learn English in Elementary school .because of the following reasons:

(1) Elementary school students are too young to learn a foreign language, such as English.
(2) English is a foreign language; it is not used in daily life.

Detail information of the reasons parents expect their children need to learn English in Elementary school can be seen in table 2 below.

Table 2
The Need of English to be Introduced to Elementary School Students

No			Number of responses					
	Options	Reasons	ES/ SSS	%	C-S1	%	S-2/3	%
1	Not Necessary	Immature Not used in Daily Activities	1	2.44	0	0.00	0	0.00
2	Needed	Basic, Early	18	43.90	17	58.62	5	41.47
		Broaden Insight	17	41.46	10	34.48	6	50.00
		Study Abroad	5	12.20	2	6.90	1	8.33
Total			**41**		**28**		**1224**	

Language Skills Parents expect their Children to Acquire

The study uncovered the language skills parents expect their children to acquire. 51.52% of the respondents expect their children acquire oral skills, such as speaking and listening. 48.48% of them expect their children acquire written skills, such as reading and writing. Table 3 shows that 29.27 % of the ES-SSS, 26.32% of the C-S-1, and 36.36% of

the S-2/3 parents respondents expect their children acquire reading comprehension skill. 37.80% of the ES/SSS, 32.89% of the C-S-1, and 30.30% of the S-2/3 parents respondents expect their children to acquire speaking ability. 31.71% of the Es-SSS, 26.32% of the C-S1, and 21.21 of the S-2/3 respondents expect their children to acquire listening comprehension skill. The table shows that writing ability is the least expected to be acquired.

Table 3
Language Skills Parents' expect their Children to Acquire

No	Language skills	Number of responses					
		ES/ SSS	%	C/S-1	%	S=2/3	%
1	Reading	24	29.27	20	26.32	12	36.36
2	Writing	1	1.22	11	14.47	4	12.12
3	Speaking	31	37.80	25	32.89	10	30.30
3	Listening	26	31.71	20	26.32	7	21.21
Total		**82**		**76**		**33**	

Language Components Parents expect their Children to Acquire

In relation to the language skills to acquired, parents expect their children to master both vocabulary and grammar. Table 3 presents data of the language components parents expect their children to acquire presents the information. The table shows that 50.94% of the Es-SSS, 50.00% of the C-S1, and 42.31 of the S-2/3 parents. respondents expect their children to master English grammar. 47.17% of the E-SSS, 40.38 of the C-S1, and 42.21 of the S-2/3 expect their children to master English vocabulary.

Table 4

No	The components measured	Number					
		ES/ SSS	%	C/S-1	%	S=2/3	%
1	Grammar	27	50.94	26	50.00	11	42.31
2	Vocabulary	25	47.17	21	40.38	11	42.31
3	Fluency	1	1.89	5	9.62	4	15.38
Total		**53**		**52**		**26**	

Reasons Parents Expect their Children to Acquire English Proficiency

Parents are aware that English is important for the students' present need and future life. Table 4 shows that parents expect their children to be proficient in English in order:

(1) To get good mark (to study;
(2) To get good job,
(3) To study abroad,

(4) To broaden insight,
(5) To keep up with others, and
(6) To enable self study.

Table 5
Reasons Parents expect their Children to Acquire English Proficiency

No	Reasons	Respondents					
		ES/SSS	%	C-S-1	%	S-2/3	%
1	To get good marks	10	10.20	4	4.65	3	7.32
2	To Communicate in English	34	34.69	27	31.46	12	29.27
3	To get good job	20	20.41	14	16.28	7	17.07
4	To study abroad	14	14.29	13	15.12	8	19.51
5	To broaden insight	18	18.37	24	27.91	11	26.83
6	To keep up with others	0	0.00	2	2.33	0	0.00
7	To prepare further study	2	2.04	1	1.16	0	0.00
8	To enable self study	0	0.00	1	0.00	0	0.00
Total		**98**		**86**		**41**	

What Parents expect from the Teaching of English in Elementary Schools

In order that their children are able to acquire English grammar and vocabulary to develop their language skills (reading, writing, speaking and listening, parent respondents expect grammar, speaking, writing, reading, and listening be taught systematically, using various teaching methods. Students should be encouraged to practice using the language for real communication intensively. Video and cassette in English should be provided In addition, TOEFL/IELTS can be given to the students.

Table 6
What Parents expect from the Teaching of English in Elementary Schools

No	Expectations	Respondents					
		ES/SSS	%	C-S-1	%	S-2/3	%
1	Teaching Vocabulary	20	16.53	12	10.53	6	10.71

Magister Scientiae - ISSN: 0852-078X
Edisi No. 25 - Maret 2009

2	Teaching Grammar	29	23.97	24	21.05	9	16.07
3	Teaching Speaking	28	23.14	24	21.05	12	21.43
4	Teaching Writing	4	3.31	14	12.28	7	12.50
5	Teaching Reading	21	17.36	21	18.42	10	17.86
6	Providing cassette/video in English	12	9.92	13	11.40	8	14.29
7	Training TOEFL/IELTS	6	4.96	3	2.63	4	7.14
8	Using English intensively	1	0.83	1	0.88	0	0.00
9	Encouraging students	0	0.00	1	0.88	0	0.00
10	Using various teaching methods	0	0.00	1	0.88	0	0.00
Total		**121**		**114**		**56**	

Schools' Responses to Parents' Expectation

To respond the expectation of the society many schools have done to following:

(1) Some schools
   (a) Use English as a medium of instruction,
   (b) provide language laboratory with its facilities, such as video, cassette, material sources, and
   (c) Hiring native speakers of English.

(2) Instead of introducing English to elementary school students in grade IV as outlined in the curriculum, most schools observed introduce English to their students in grade I (see Table 7).

Table 7

No	Grade	Private	%	State	%
1	I	28	73.68	12	60.00
2	II	2	5.26	3	15.00
3	III	4	10.53	4	20.00
4	IV	4	10.53	1	5.00
5	V	0	0.00	0	0.00
6	VI	0	0.00	0	0.00
Total		**38**		**20**	**0.00**

Parents' Responses to the Teaching of English in Elementary Schools

In responding schools efforts in meeting parents' expectation, only 32.94% of the parent respondents are satisfied. They are satisfied because

(a) the children's marks are good, (b) their children are able to communicate in English, (c) various teaching techniques are used, and (d) their children are not narrow-minded.

While schools have tried hard to meet parents' expectation and to make their teaching program successful, most (67.06%) of parent respondents are not satisfied with the teaching of English in elementary school:

(a) the teaching techniques are monotonous
(b) no variation of teaching materials
(c) lack of practice in using English for communication
(d) teachers' poor competence
(e) the class is too big
(f) insufficient of facility
(g) too much materials given but lack of time allocation

Table 8
Parents' Responses to the Teaching of English in Elementary Schools

No			Number					
			ES/JSS	%	SSS	%	C/U	%
1	Satisfied	Reasons	16	39.02	8	25.81	3	50.08
		Good Marks	2	13.33	1	14.29	3	0.00
		Able to Communicate	3	20.00	2	28.57	0	0.00
		Good Competence	7	46.67	3	42.86	1	16.67
		Broaden Insight	2	13.33	0	0.00	2	33.33
		Good Methods	1	6.67	1	14.29	0	0.00
Total			**15**		**7**		**6**	
2	Disappointed	Reasons	25	60.98	23	74.19	10	76.92
		Monotonous Methods	3	13.33	7	29.57	3	30.00
		Monotonous Materials	1	4.35	8	33.33	0	0.00
		Lack of Practice	6	26.09	2	8.33	5	50.00
		Lack of time	5	21	5	20.83	1	10.00
		Class too Big	1	4.35	0	0.00	0	0.00
		Insufficient Facility	1	4.35	0	0.00	0	0.00
		Bad Marks	1	4.35	0	0.00	0	0.00
		Poor Competence	4	17.39	2	8.33	1	10.00

		Too much Materials	1	4.35	0	0.00	0	0.00
Total			**23**		**24**		**10**	

English Courses Outside School

Realizing that the teaching of English in Elementary school is not satisfactory, 65.88% of parent respondents send their children learn English outside school. They sent their children to various course and private course. Those whose English is good, teach their own children at home (see table 9). 34.12% of parent respondents do not send their children to any courses. They let their children strive with their English by themselves.

Table 9
English Courses Outside Schools

No		Number					
		ES/JSS	%	SSS	%	C/U	%
1	Yes	24	58.54	22	70.97	10	35.71
2	No	17	41.46	9	29.03	3	23.08
Total		**41**		**31**		**13**	

Table 10
Kinds of Course

No	Options	Number					
		ES/JSS	%	SSS	%	C/U	%
1	Attending Course	9	36.00	15	46.88	5	35.71
2	Bt Parents	11	44.00	10	31.25	5	35.71
3	Private Course	5	20.00	4	12.50	2	14.29
4	Peer Group	0	0..00	2	6.25	1	7.14
5	Self Study	0	0.00	1	3.13	1	7.14
Total		**25**		**32**		**14**	

Conclusion and Recommendation

In short, it can be summarized that most parents think that English needs to be introduced to their children in elementary school as early as possible for different reasons. The most dominant of these is to have their children be able to communicate in English. In order to achieve this, they expect that their children master different language skills, in particular speaking, listening and reading, with less expectation on writing. Concerning the language components, most parents still hold the conventional expectation, with grammar and vocabulary dominating the other language components like fluency or pronunciation. They expect that the English teacher at school gives more portions in the teaching of these language skills and components. Furthermore there is a split

between the parents who feel satisfied with the current teaching of English in their children's school and those who don not feel satisfied. As a result, there has also been a growing phenomenon of parents sending their children to English courses outside school.

So, what can we, as school teachers, do about this? The answer, inevitably, is to constantly improve our teaching quality to meet the ever increasing demands of children mastering English in their elementary school years. We simply have to realize that these demands are the results of the globalization where English now is a required skill rather than it has ever been in the past. Our current teaching approach and methodology have also to be constantly evaluated to shift from the perspective of finding more effective methods of language teaching to perspective of focusing in pedagogy, as reflected in the constructivism and competence-based approaches that are currently adopted in our national curriculum at the moment.

References

Kasihani, K.E. 2004. *Pengajaran Bahasa Inggris di Sekolah Dasar. Kebijakan, Implementasi, dan Kenyataan. Pidato Pengukuhan Guru Besar*. Malang. Universitas Negri Malang.

Lie, Anita. 2001. Multicultural Issues in the 1944 English Curriculum in Indonesian Senior Secondary Schools. in Renandya, Willy A and Nilda Sunga. *Language Curriculum and Instruction in Multicultural Societies Anthology Series*. Singapore: SEAMEO Regional Language Center. 42-79

Ngadiman. Agustinus. *Kebijakan Pengajaran Bahasa Inggris di Sekolah Dasar. Masalah dan Berbagaicara Pemecahannya*. Magister Scientiae

Renandya, Willy A and Nilda Sunga. 2001 *Language Curriculum and Instruction in Multicultural Societies Anthology Series*. Singapore: SEAMEO Regional Language Center.

Dynamics of Lava Flows

Tjondro Indrasutanto

Abstract. Extensive lava flows, like those of Mount Merapi of Central Java, require thickness only of the order of meters and temperatures only slightly above the melting point to spread over distance of the order of hundreds of meters. Other things being equal the spreading distance is propotional to the cube of the thickness of the flow.

Spectacular The Mount Merapi Of Central Java

The Mount Merapi of Central Java furnishes what is probably the most spectacular display of basaltic lava flows. Not only are there accumulated basalt thickness in excess of the thousands of meters, but subsequent volcanic and giant floods have helped to expose enormous sections of lava flows.

Even a casual observer is, then often amazed to see a particular lava flow that extends over thousands meters without any noticeable variation in thickness and with hardly any indication that the flow was begining to solidify as it was flooding the countryside. It thus seems reasonable to conclude that a gigantic lava lake was established so quickly that lavas did not have time to cool to the point of solidification. Even the direction of the flow is still a matter of speculation.

Since lava flows of such dimensions have never been observed by man, speculation about their dynamics presents an interesting theoritical problem. Probably the most extensive study of the flow rates of flood basalts. However to formulate the equation of motion, we have to take into account the fact that the lavas are cooling off as they flow, and that their viscosity increases rapidly ith a decrease in temperature. The dependence of viscosity μ on temperatur T as being of the form

$$\mu = \mu_0 \exp \frac{b}{T} \quad \text{..... (1)}$$

The parameters μ_0 (viscosity at an infinite temperature) and b must be determined experimantally. Recent data by Murace and Mc. Birney (1970) reveal $\mu_0 = 1{,}380 \times 10^{-7}$ kg.m^{-1}.sec^{-2} and b = 2,65 x 10^4 °K. Shaw et al (1986) give slighty higher values of $\mu_0 = 6{,}025 \times 10^{-7}$ kg.m^{-1}.sec^{-2} and b = 2,73 x 10^4 °K (Different parammeters are obtained for melts of basalts, but the difference may be due to later loss of volatiles. Thus, those values are probably less applicable to our problem). Since the Mount Merapi basalts do not exhibit signs of solidification, they must have reached the distant points before their temperature dropped bellow 1150°C. Moreover, they were extruded on substrata that were, on the large scale, horizontal to within about half a degree and probably less. We

can thus write the equation of motion of the lava in the greatly simplified form

$$\frac{Dv}{Dt} = -\frac{1}{\rho}\frac{\partial P}{\partial x} - g\beta + \frac{\mu}{\rho}\frac{\partial^2 v}{\partial y^2} \quad \text{..... (2)}$$

Where v is the velocity of the flow, ρ is the lava density, P is the pressure, and β is the slope of the bottom. To simplify calculations, we disregard the inertial terms in (1). Thus, we actually investigate a steady laminer flow rather than a turbulent spreading. But simple reasoning shows that the error thus introduced can result only in a necessary increase in the initial temperature or the thickness. Our result then will yield the minimum necessary lava temperature and thickness.

We further approximate

$$P = \rho.g.h$$

where h is the thickness of the flow. If we assume that the flow velocity is predominantly horizontal, then

$$\rho.g\left(\frac{\partial h}{\partial x} + \beta\right) = \mu.\frac{\partial^2 v}{\partial y^2} \quad \text{..... (3)}$$

The term $\frac{\partial h}{\partial x}$ is the slope of the upper surface of the flow, to a good approximation can be set equal to a constant $\alpha << 1$. Boundary conditions of vanishing velocity at the bottom of the flow and vanishing shearing stress at its free surface yield

$$v = \frac{\rho.g.(\alpha + \beta)}{2\mu}.y.(y - 2h) \quad \text{..... (4)}$$

obviously, to have a positive velocity, $(\alpha + \beta)$ must be negative.

Wether or not solution (4) is justified depends on the Reynolds number R of the flow. The significant linear dimension of the system being h,

$$R \approx \frac{h^3.\rho^2.g.(\alpha + \beta)}{2\mu^2} \quad \text{..... (5)}$$

with μ of the order of 10^2 poises and $(\alpha + \beta) \approx 10^{-2}$, R will reach the critical value of 10^3 for h of the order of the meters. This coincidence is fortune. It means that turbulance will not make (4) too far for correct; yet, at the same time, there will be enough mixing for lava temperatures to depend primarily on the distance traveled and hardly at all on depth below surface.

Next we analize the process of cooling of the lava (Shaw and Swanson, 1970). Of the three processes of heat loss, conduction is certainly negligible. Large quantities of heat are probably lost by connection in the atmosphere, but numerical estimates (Freagle and Businger, 1963) indicate that unreasonably high wind velocities would be necessary to make this loos comparable to loos due to blackbody radiation. We therefore approximate the loos of heat of the lava layer (Shaw and Swanson, 1970) as being due to radiation alone.

$$-\frac{\partial T}{\partial t} = \left[\frac{\varepsilon.\sigma}{\rho.\eta.a.h}\right] T^4 \quad \text{..... (6)}$$

where ε is the specific emissivity of lava, σ is the Stefan-Boltzmann Constant 5,67 x 10^{-8} Joule.m^{-2}.sec^{-1}.°K^{-4}, η is the energy heat equivalent of 4,185 x 10^3 Joule.$Kcal^{-1}$, and a is the specific heat capacity of the lava (approximately 0,2 Kcal.kg^{-1}.°K^{-1}). Heat will also be generated as gravitational energy is clissipated in the internal friction of the lava; heat may also be either generated or consumed owing to entropy changes. The value resulting from gravitation is too small by at least 2 orders of magnitude. The value resulting from entropy changes is not yet known, but it is unlikely that this phenomenon is significant during the early period of spreading.

Since we have better data on the distance floaded x than we have on the duration of flow, we rewrite (6) as

$$-\frac{dT}{T^4} = \frac{e.\sigma}{\rho.\eta.a.h} dx < v > \quad \text{..... (7)}$$

where $< u >$ is the mean flow velocity

$$< v >= \frac{dx}{dt} = -\frac{\rho.g.(\alpha+\beta)}{3\mu}.h^2 \quad \text{..... (8)}$$

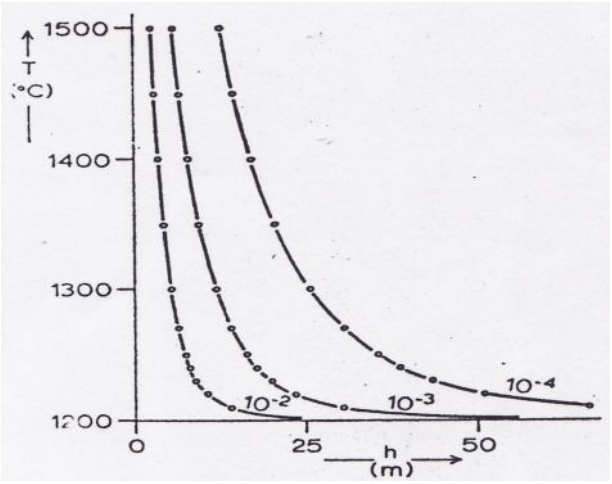
Substituting (1) and (8) in (7), we obtain

$$\frac{dT}{T^4.\exp\left(\frac{b}{T}\right)} = \frac{3.\varepsilon.\sigma.\mu_0}{\rho^2.\eta.a.h^2.g.(\alpha+\beta)} dx \quad \text{..... (9)}$$

This equation can be intregated as

$$\exp\left(\frac{-b}{T}\right)\left[\left(\frac{b}{T}+1\right)^2+1\right]_{T_0}^{T_s} = \frac{3.\varepsilon.\sigma.\mu_0.b^3.x}{\rho^2.\eta.a.h^2.g.(\alpha+\beta)} \quad \text{..... (10)}$$

where T_0 is the initial temperature and T_s is the temperature of solidification (approximately 1150°C = 1423°K)



Minimum lava-flow thicness h and minimum initial temperature T_0 needed to produce a 300 m flow [$(\alpha + \beta)$ as parameter]

Equation (10) was evaluated for $\varepsilon = 1$, and μ_0 and b as derived from Murase and Mc.Birney's (1970) results, x = 300 m, $\rho = 2{,}65 \times 10^3$ kg.m^{-3} and $(\alpha + \beta) = 10^{-2}, 10^{-3}$, and 10^{-4}. Results are shown in figure 1. (slightly different curve would be obtained for other values of the parameters. Thus, for $\varepsilon = 0{,}5$, all values of h would be reduced by a factor of $(0{,}5)^{1/2} \approx 0{,}8$. For values of μ_0 and b derived from shaw et al, 1986, all curves would be sloping to the right at a less steep angle. Nevertheless, the results would, in principle, be the same.

We thus see that lavas can flow enormous distance over nearly horizontal areas, with negligible hydrostatic head, even when their thickness are only of the orders of meters with increasing initial temperature, the necessary flow thickness decreases quite rapidly at first and then decreases asymptotically toward a small but finite value.

Since the cube of h appears in (10), a small increase of the thickness may result in large increases of the distance the flow can travel

All these results are in good agreement with the result of Shaw and Swanson (1970).

An even more gradiose example of such a lava flow may eventually be found on the moon. Since the distance to which the lavas spread there seems to be greater by about a factor of 4, and since gravitational acceleration is lower by a factor of 6, the right hand side of (10) may be greater by about factor of 24. However, since the cube of h appears in (10) the flows thickness needs to be increase by less than a factor of 3 to produce the desired effects.

Acknowledgements

I would like to thank my friend Drs. Stefanus Laga Tukan, M.Pd., for checking my English.

I would like to thank head of Volcanology Laboratory Yogyakarta, for providing the data and making valuable suggestions for improving the text.

References

Fleagle, R. G., and J. A. Businger, 1963; *An Introduction to Atmospheric Physics*, edited by J. Van Mieghem, Academic, New York.

Murase T., and A. R. Mc.Birney, 1970; Viscosity of Lunar Lavas, Science

Rittmann, A., 1962; *Volcano and Their Activity*, translated from German by E. A. Vincent, Interscience, New York.

Sakuma, D. and T. Nagata, 1957; *Physicsal Volcanology*, in Handbuch der Physik, edited by S. Fluegge, Springer, Berlin.

Shaw, H. R., and D. A. Swanson, 1970; *Eruption and Flow Rates of Flood Basalts*, Eastern Washington State College Press. Cheney, Washington.

Shaw, H. R. at al, 1986; The Viscosity of Basaltic Magma: *An Analysis of Field Measurements in Makaopuhi Lava Lake*, Hawaii, Amer J.Sci.