

Characteristics and Implications of Age-Grade Distortion in the Ethiopian Primary Education

Teklehaimanot Haileselassie*

Introduction

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Due to these actions of changes the impeding problems of education are being successfully tackled and thus the future prospect of the sector is now brighter than ever before. Some problems that seem to linger for sometime, whatever measures are taken, need to be properly acknowledged and addressed to. Such problems if appreciated by all stakeholders could better be tackled in the actual classroom teaching learning process.

One of such subtle problems which is the major concern of this paper is the issue of the demographic characteristics of the primary education students in Ethiopia.

In epistemology in general and in the educational enterprise in particular the learner or the student is the focal element. One characteristic of the learner to be considered in learning is age. Age is one rationale for structuring a system of education. Almost all tiers of education in the first and second levels are structured according to age groupings.

In Ethiopia it is assumed that pre-school ranges from age 4-6 while primary education is supposed to begin at the age of seven (and above). One cannot realistically expect that a country like Ethiopia will have homogeneous age-

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group classes. Age disparity is a phenomenon one cannot avoid at this stage of development in Ethiopia, a country with a predominantly rural population, low level of literacy, low participation rate and in general with a low level of socio-economic development.

The major concern of this paper is to discuss the magnitude of the age-grade in the primary school system and to highlight the factor of awareness of stakeholders on the one hand and the implications of the gap between them on the quality of education on the other hand. Because age-grade is supposed to be relatively not problematic at the second and third levels of education, it is not treated in this paper.

Literature Review

In the developed world age variation is no longer a school problem to be seriously talked about. That seems to be one reason why current literature on age discrepancy seems to be not abundant. It can be assumed that if documentation on the issue is scanty globally, it is almost totally absent in the case of Ethiopia.

It is doubtless that most formal education is given in one or another kind of grouping. Although some experts on curriculum, like Partt (1994), believe that grouping needs to be arranged by readiness rather than by age, as most modern schools are structured into grouping by age, they do not deny that it is instrumental in the absence of other better means of grouping (differentiation).

Some surveys in different countries like UK and Malta suggested that the oldest children achieved better than the youngest in the same class. This was among children born in different seasons of the same year. But in the case of students born in different years a survey in Cyprus also indicated a spurious reverse result showing that the older children achieved less than the younger children (Melkonian 1997). It was explained by the same report that this was due to the fact that most of the older students in the class were repeaters.

In their studies in Mexico, Bowman and Goldblatt differentiated between grade-age in the first grade of primary education and other grades of the same

level. According to them over-age at grade one was related to late entry and to the overall socio-economic situations and in the other grades it was also the result of repetition. The same study pointed out that over-age problem in Latin American countries ranged from 43% in Brazil to 11% in the Caribbean (Patrinos and Psacharopoulos 1995).

It was also argued by Patrinos and Psacharopoulos (1995) that the main factor of age-grade was not late entrance but rather repetition, and that repetition caused age heterogeneity which in turn caused repetition resulting in a vicious circle of cause and effect. But this argument of late entrance or repetition issue was not concluded with a strong level of confidence. In their research in Guatemala, poverty, language problems, and cultural and household factors like family level of literacy were mentioned as the principal causes of the over-age problems. Hence children from the poor, less educated and rural background were found to be more over-aged than others.

On the other hand the same empirical study in Guatemala also confirmed that students in the private schools were much nearer to the right age than others while the over-age problem was more prevalent in the public schools than in private schools.

Since the advent of the 1990's differentiation has been considered a very important concept and essential *criteria for effective classroom practice* (Kerry and Kerry, 1997). According to McGravey (1996), however, differentiation was actually found to be very difficult due to many limitations related to class size, time, and range or diversity of student characteristics. He concludes that differentiation is *very difficult for teachers to achieve the goals they set for themselves and the only route open may be compromise*. Admitting that differentiation is teacher and resource intensive, Kerry and Kerry (1997) have concluded, however, that provided teachers are equipped with practical skills rather than the theoretical recommendations in official documents, it can be applied in the classrooms. Here one can see that differentiation is neither impossible nor easy practice for teachers.

Literature on the age-grade distortion and the notion of differentiation is almost non existent in Ethiopia. This probably might be due to the fact that it is more obvious and almost a given rule and usual than the exception that

planners and practitioners were used to it and they *assumed* age homogeneity. One attempt by PHRD (1996) gave a short description of the problem of late entry into schooling. It pointed out that only 12% started grade one at the right age and concluded that children from the rural and poorer and uneducated families started later than those from the urban centers and educated higher income families. Although some technical drawbacks were raised in its review by Mulugeta (1998) the PHRD study also indicated that the most probable reasons for late entry were distance and opportunity cost factors. Nevertheless it neither mentioned the under-age problem nor attempted the curricular implications of the age discrepancy. One report by the Tigray Education Bureau (1996) presented that the right age and under-age i.e. 12-14 year students on average scored higher in the 1995 Grade 8 National Examination than over-age students; the figures in the same report implied that the more over-aged the students were the lower the grades they scored.

Tegegne (1998) hastily remarked that *early starters* were not a problem and investigation was needed to solve the problem of *late starters* only. He also concluded that *over-aged children in rural areas were likely to dropout of school* before they acquired even the level of functional literacy. This statement needs to be taken with caution as the majority of the students throughout the primary level in Ethiopia are over-age.

A recent study by Anbesu (1998) on classroom interaction touched on many important instructional issues. Although it did not even mention the age heterogeneity case, it is interesting to note the findings that only 8.7% of the teachers considered students interests during their lesson planning and 79% of those that applied some kind of grouping used criteria related neither to interest nor to ability in their classroom organization activities. This indicates that differentiation in the primary schools is not commonly practised.

Methodology and Data Used

The source of data for this paper is the School Census of the Ministry of Education presented in the yearly published Education Statistics Annual Abstracts and mimeographed data sheets. Data of five consecutive years (i.e. from 1993/94 up to 1997/98) was processed and used in the study. There was

no need for sampling and ordering techniques, since the entire raw data was obtained from the documents. Percentage points were calculated so that comparison between different sets and subsets was possible. Five basic tables showing the proportions of under-age, appropriate age and over-age children were set by year, gender, location (urban/rural) and type of school (government/non-government) for grades 1 which is the entry level, 4 which is the terminal of lower cycle of primary education and 8 which is the terminal level of primary education. Data concerning the location and type of school was available for only four years.

Discussion and Findings

Discussion

As pointed out in the introductory part of this paper, at this stage of development one should not expect homogeneous age classes in Ethiopian schools. Nevertheless, the degree of the heterogeneity and its implications on curricular and instructional policies and practices need to be investigated.

The Right Age Students

At the entry level of primary education the proportion of right age students has increased slightly in five years time from 18.3% to 20% while it decreased in both grades, four and eight, from 23.2% to 16.5% and from 33.4% to 27.4% respectively (see Table 1). This could be further elaborated by the fact that out of the 2,483,763 enrolled in 1998 in three of the grade levels, there were only 459,199 right age students which constituted only 18.5% showing an astonishing high grade-age distortion of 81.5%.

An important phenomenon to be reckoned with here is that within the last four years it is observed that the proportion of the right age students sharply drops at grade 4 and its share becomes prominent at grade 8.

One fact that needs a serious consideration is that at the terminal grade of the primary level education the percentage of both male and female appropriate age students has gradually been declining. Table 1 shows that it has

decreased by 6% within the five years i.e. from 33.4% in 1993/94 to 27.4% in 1997/98. This requires further investigation.

Table 1: Percentage of Enrollment by School Age and Gender in Government and Non-Government Schools

Year	S.A.	Grade & Gender								
		1 st Grade			4 th Grade			8 th Grade		
		M	F	B	M	F	B	M	F	B
1993/94 (1986)	a	3.1	4.3	3.5	11.9	17.8	14.3	27.1	26.9	27.0
	b	16.5	21.4	18.3	21.2	26.2	23.2	30.8	36.3	33.4
	c	80.4	74.3	78.2	66.9	56.0	62.5	42.1	36.8	39.6
1994/95 (1987)	a	3.2	4.4	3.7	10.3	14.6	12.0	26.7	26.4	26.6
	b	18.0	23.2	19.8	16.8	22.2	18.9	27.2	32.7	29.7
	c	78.8	72.4	76.5	72.9	36.8	69.1	46.1	40.9	43.7
1995/96 (1988)	a	2.6	3.5	3.0	8.9	12.3	10.3	20.2	21.2	20.7
	b	17.1	22.3	18.9	15.4	20.5	18.9	27.1	32.7	29.6
	c	80.3	74.2	78.1	75.7	67.2	69.1	52.7	45.9	49.7
1996/97 (1989)	a	2.4	3.3	2.7	7.9	11.5	9.2	18.4	20.2	19.1
	b	17.3	22.2	19.1	14.8	19.8	16.6	26.0	31.7	28.5
	c	80.3	74.5	78.2	77.3	68.7	74.2	55.6	48.1	52.4
1997/98 (1990)	a	3.5	3.6	3.5	7.1	10.6	18.7	18.7	21.3	19.8
	b	18.5	22.2	20.0	14.7	20.0	24.9	24.9	31.0	27.4
	c	78.0	73.9	76.5	78.2	69.4	56.4	56.4	47.7	52.8

N.B:

- a = under-age
- b = appropriate age
- c = over-age

Other characteristics remaining the same, there is more right age proportion among female students than among male students. For instance in 1997/98 the appropriate age for boys at the three grade levels was 18.5%, 14.7% and 24.9% compared to 22.4%, 20.0% and 31.0%, for girls respectively. This is consistently true throughout all grades and years.

A clear cleavage is observed between the chances of urban and rural students joining primary schools at the right age. Urban schools have proportionately more right age students (see Table 2 and Table 3). Similarly the non-government schools have proportionately more right age students enrolled

than the government schools. This fact also concurs with situations in other countries.

Table 2: Percentage of Enrollment by School Age and Gender in the Rural Schools

Year	S.A.	Grade & Gender					
		1 st Grade		4 th Grade		8 th Grade	
		M	F	M	F	M	F
1994/95 (1987)	a	2.3	2.7	6.0	7.8	22.2	24.7
	b	14.9	18.7	11.0	14.7	25.3	30.7
	c	82.8	78.6	83	77.5	52.5	44.6
1995/96 (1988)	a	1.9	2.3	5.1	6.5	14.7	18.9
	b	14.6	18.6	10.3	13.5	23.9	29.1
	c	83.1	79.1	84.6	80.0	61.4	52.0
1996/97 (1989)	a	1.7	2.0	4.6	5.7	13.4	16.3
	b	15.2	19.2	10.6	14.1	22.4	28.9
	c	83.1	78.8	84.8	80.2	64.2	54.8
1997/98 (1990)	a	2.9	2.4	4.4	5.6	12.6	16.4
	b	16.2	19.5	10.9	14.4	22.7	27.9
	c	80.9	78.1	84.7	80	64.7	55.7

N.B:

- a = under age
- b = appropriate age
- c = over-age

The Under-age

At the national level, 3.0% to 3.7% of the new entrants in grade one are under the officially designated age for joining primary schooling.

It is observed that it is more likely that those who join school below the age of seven, which is the right school age for grade one, are successful. Their proportion grows with grade level throughout the five years under consideration. For example in 1993/94 they constituted 3.5, 14.3 and 27.0 percentage points at grades one, four and eight respectively. One may argue this could be an effect of probable higher proportion of under-age entrants prior to 1993/94. But on the one hand the proportion of entrants has remained more or less the same throughout the five years, and on the other hand, and more convincingly, the 1993/94 under-age grade one national

cohort of 3.5% is 9.2% at grade four in 1996/97. Other two revealing examples of evidence are the following. The 1994/95 grade one underage cohort group changed from 3.7% to 8.4% in grade four in 1997/98. Similarly the grade four underage group of 1993/94 changed its position from 14.3% to 19.8% in grade eight in 1997/98.

Table 3: **Percentage of Enrollment by School Age and Gender in Urban Schools**

Year	S.A.	Grade & Gender					
		1 st Grade		4 th Grade		8 th Grade	
		M	F	M	F	M	F
1994/95 (1987)	a	6.8	7.8	16.0	18.8	27.8	26.6
	b	29.2	31.9	24.6	26.8	27.7	32.9
	c	64.0	60.3	59.4	54.4	44.5	40.5
1995/96 (1988)	a	5.8	6.6	14.9	16.6	21.5	21.6
	b	27.9	31.1	23.6	25.5	27.9	32.2
	c	66.3	62.3	61.5	57.9	44.5	45.2
1996/97 (1989)	a	5.5	6.5	13.7	16.3	19.5	20.6
	b	26.5	30.0	22.3	24.8	26.9	32.1
	c	68.0	63.5	64.0	58.9	30.6	47.3
1997/98 (1990)	a	5.9	6.8	13.0	15.5	20.2	21.9
	b	27.8	30.7	22.7	25.5	25.5	31.4
	c	66.3	62.5	64.3	59.0	54.3	46.7

N.B:

- a = under-age
- b = appropriate age
- c = over-age

Hence the increase of proportion of underage students with grade level can only be attributed to the high degree of survival and rate of success compared with other age group entrants.

Joining school below the age of seven is more prevalent in the non-government and urban schools and it is least likely in government and urban

schools (see Tables 2-5). Here again it is important to find out why the under-age students are more successful than those in the right age position.

Table 4: **Percentage of Enrollment by School Age and Gender in Government Schools**

Year	S.A.	Grade & Gender					
		1 st Grade		4 th Grade		8 th Grade	
		M	F	M	F	M	F
1994/95 (1987)	a	2.5	3.0	8.8	12.6	25.6	25.6
	b	17.5	22.7	15.7	21.1	26.6	32.6
	c	80.0	74.3	75.5	66.9	47.8	58.0
1995/96 (1988)	a	2.1	2.5	7.5	9.9	18.6	20.2
	b	16.9	22.0	14.5	19.4	26.5	32.6
	c	81	75.5	77.9	70.7	47.8	47.4
1996/97 (1989)	a	1.9	2.3	7.5	9.9	16.8	18.9
	b	17.1	22.8	14.5	18.9	25.3	31.7
	c	81	5.9	77.9	71.8	57.9	49.4
1997/98 (1990)	a	2.9	2.7	6.1	8.5	16.9	19.3
	b	18.3	22.2	13.9	19.1	24.4	31.3
	c	78.8	75.1	80	72.4	58.7	49.4

N.B:

a = under-age

b = appropriate age

c = over-age

The Over-age Students

Practically four out of five of the boys and one out of five of the girls in grade one in the Ethiopian primary schools are overage students with ages ranging widely from 8 to more than 16 years.

The over-age issue is a serious reality rather than an exceptional condition or a problem to be ignored. Even though the over-age entrants have relatively the lowest survival rate and they are those that drop most before they finish primary education, they still constitute the majority even at the terminal grade of the primary education.

Thus the majority of the Ethiopian primary school students are over-age and their age varies tremendously. Over-age as a prevailing factor seems to linger, and even increases as in the case of grade four where it has risen from 62.5% in 1993/94 to 75.1% in 1997/98. If curriculum planners, designers and title developers do not seriously treat this reality, there is a dangerous potential threat for the quality and relevance of education in the country.

Table 5: Percentage of Enrollment by School Age Category and Gender in Non-Government Schools

Year	S.A.	Grade & Gender					
		1 st Grade		4 th Grade		8 th Grade	
		M	F	M	F	M	F
1994/95 (1987)	a	15.6	20.8	23.8	30.7	33.7	29.9
	b	24.4	29.1	27.3	28.9	30.8	34
	c	60	50.1	51.1	40.4	40.4	36.1
1995/96 (1988)	a	13.6	19.1	23.8	30.3	30.2	26.9
	b	22.3	28.0	15.4	28.1	31.4	33.3
	c	64.1	52.9	75.7	40.4	38.4	39.8
1996/97 (1989)	a	14.4	19.9	7.9	30.3	29.9	25.8
	b	23.0	27.0	14.8	28.1	31.4	31.8
	c	66.6	53.1	77.3	41.6	38.4	42.4
1997/98 (1990)	a	16.6	21.7	22.3	28.7	34.9	31.4
	b	22.7	27.5	26.1	28.3	28.9	29.6
	c	60.7	50.8	51.6	43.0	36.2	39.0

N.B:

- a = under-age
- b = appropriate age
- c = over-age

Understandably the highest proportion of over-age students as indicated in Table 2 is in the rural schools. But even the non-government and urban schools still admit a majority of over-age students.

Some Implications

The usually accepted practice is that the curriculum of any country considers the core group, and the instructional process deals with individual differences. But with over 80% of age-grade distortion in the case of the Ethiopian primary schools it is obviously not easy to have a focal age in the process of selection of content. This in turn makes it practically difficult to plan and undertake the classroom teaching learning process. The case can be elaborated by the fact that a small child of five and an adult of eighteen years may enroll together in grade one, and the age range is as extraordinarily big as 12 years and more. This alarming fact implies that at least 13 different age group students are sitting together in one grade class. Literature asserts that heterogeneity in class causes repetition which in turn generates more heterogeneity and causes classroom teaching learning difficulties for the non-repeaters as well. (Patrinos and Psacharopoulos 1995)

In fact in most cases the age issue is not even mentioned and the curriculum documents of primary education have subsumed it and simply assumed the age grouping depicted in the educational structure given in the education and training policy documents.

One very difficult problem which is a feature of a democratic society that aims at providing universal basic education is the requirement to adjust curriculum and instruction to a more diverse school population (Coombs 1985).

The Ethiopian classroom situation seriously needs the adoption of the principle of individualized and child centered approach of education not only due to pedagogical principles but also because of the serious age-grade distortion. This is to emphasize that differentiation ought to have a distinct role in the teaching learning process at the primary level of education so that the curriculum could be implemented at a desirable level of satisfaction. Thus the role of the teacher in Ethiopia is compounded by the need to bridge the heterogeneity by ingenious and creative means of lesson planning and classroom management.

At this point it is essential to assess the awareness and sensitivity of the curriculum of primary teacher education about the age diversity in the schools. Although concepts like *children with special need* and *individual differences* related to *intelligence*, *economic differences* and *gender differences* are listed and ideas like *student centered methods of teaching*, *instructional planning* and *classroom management* are included and discussed in the teacher education dossiers, the age issue has never been pointed out as an area of serious concern in the specific syllabuses for the primary school teacher training programme. Hence in spite of the implicit recommendations of the Teacher Education Curriculum Development Panel (ICDR) in its *A Guide for Improving the Teacher Training Syllabuses for the First Cycle Primarily Education* (1998:11-13), the specific syllabuses and especially those of pedagogics, psychology, physical education, etc. never seem to pay attention to the age diversity issue. This missing link need to be rectified, since by the end of the day the effective application of differentiation is associated with the good practices of the teacher (Kerry & Kerry: 1997).

Conclusion

The classrooms in Ethiopian primary schools consist of complex age heterogeneity. The problems of age heterogeneity and age-grade distortion in general and over-age in particular in relation to curriculum and instruction is a serious issue that needs to be attended to in curriculum planning, teacher education and pedagogic research. Some of the findings that could serve for further and in-depth research on the complex school demographic situation are presented here.

Distortion is higher in the rural schools than in the urban schools and lower in the non government schools than in the government schools. This could be attributed to factors of distance, opportunity costs related to child labour and level of parental consciousness about education. One unexpected fact, however, is the fact that age-grade distortion is less among female students than male students. This needs further empirical query.

The majority of enrolled students throughout the primary education sub-sector are over-age, and the majority of the dropouts are the over-age. An

investigation along this line is pertinent to check whether age distortion is affecting curriculum relevance and causing wastage in the system. Although most of the under-age students are in the urban centres and a number of concealed factors associated with the urban setting could be conjectured to be the causes, it is curious to find out why the under-age students have the highest rate of survival and are even retained better than the right age students. This is a serious curricular case to be deciphered.

An assessment of the appropriateness of content and methodology to the existing age composition of the student body needs to be a major concern of urgency. The Institute of Curriculum Development and Research of the Ministry of Education will have to give special attention to this issue in the process of evaluation of the new curriculum. This problem of age-grade distortion is to stay with us for sometime to come and continuous focus and consideration of all stakeholders need also to be incorporated in our system regarding this enormous demographic feature in our primary schools.

One easy method of reducing the over-age problem caused by repetition is to implement the automatic promotion policy at the first cycle of primary education which is currently disregarded by the grassroots in the subsystem. In 1997/98 there were 531,267 students who were repeating their previous year grades. This negatively affects not only the coefficient of internal efficiency but also effectiveness of the classroom and hence the quality of education.

The last but not least desirable intervention is our responsibility to take concerted measures to raise the awareness of the teacher of this massive problem and ensure her/his practical preparedness to apply differentiation in the classroom and tackle the case in situ.

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