

CONSTRUCTION OF GENDER IN VISUAL SIGNS IN SELECTED KENYAN SECONDARY SCHOOL ENGLISH TEXTBOOKS

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Abstract

Textbooks are a powerful tool for the construction of social identities. Consequently, the manner in which gender is portrayed in visuals in textbooks can greatly affect the images of males and females in the society that learners develop. If gender bias in textbooks is addressed, it would be a great accomplishment towards achieving equality in education: a fundamental goal of both Education for All (EFA) and sustainable Development Goals (SDGs). In the Kenyan context, the National Policy on Gender and Development (NPGAD) was developed to address disparities in the visibility, status, and perceived potential of males and females portrayed in textbooks. However, reviews on Kenyan textbooks suggest that subtle issues around gender representation imbalance are evident. With this mismatch between policy and practice, this paper analyses gender construction in selected visuals in Kenyan secondary schools English s from a socio-semiotic perspective. The findings revealed that males' images transcended the females' in selected textbooks. The study also revealed that males were assigned the actor role and were more involved in both non-transactional and transactional actional processes than females. Further, males were found to make direct gazes at the reader than females. The paper concludes that disproportionate representation of gender is evident in the selected textbooks where males are implicitly or explicitly presented as superior to females. The study recommends that gender representation be considered in the design and selection of visuals to be included in English textbooks. For those textbooks which are already in use, the Kenya Institute of Curriculum Development (KICD) could initiate review activities to improve gender parity in the visuals.

Keywords: *Socio-semiotics, Textbooks, Gender Construction, Visuals*

INTRODUCTION

Textbooks are instrumental in a formal language teaching and learning set-up. Richards (2001) notes that textbooks are essential components in many language programs since they provide the primary language input that learners receive and practice in the classrooms. Bruegilles and Cromer (2009) further note that textbooks play a crucial function in society by modelling the required values, social behavior and norms. Similar sentiments are raised by Lee

(2011) who acknowledges that educational materials are a key mechanism of socialization that instills values and attitudes in young people, including differentiated gender roles. It therefore means that textbooks are a powerful tool for the construction of social identities. Consequently, the manner in which male and female genders are portrayed in visual images in textbooks can greatly affect the images that learners develop of males and females in the society. According to Tahririan & Sadri (2013), the way images are

represented in textbooks may directly affect students. Dijk (1995) makes similar views when he notes that images could inadvertently or advertently predispose learners to specific philosophies as ideologies can be transmitted not only by the verbal signs, but also by the visual semiotic modes.

Textbooks in Kenya have been given prominence through an initiative dubbed Secondary Education Quality Improvement Project (SEQIP) which aims to improve student learning and transition from primary to secondary education, and also to improve retention of learners in school. One of the components of SEQIP is to improve the quality of teaching by ensuring that textbooks used in Kenyan secondary schools are available to learners. Under SEQIP, more textbooks are being made available in the four learning levels in secondary school. The selected textbooks were based on a re-evaluation sanctioned by the Ministry of Education since January 2018. The re-evaluation needed to address gender representation disparities as stipulated in relevant gender policies in Kenya.

Addressing gender disparity in textbooks and; consequently, the curriculum, is an important avenue towards achieving equality in education as envisioned in both Education for All (EFA) and Sustainable Development Goals (SDGs) blueprints.

The National Policy on Gender and Development (NPGAD) was established in 2018 in line with Article 27(3-8) of the Constitution of Kenya (2010) which lays emphasis on gender equality and freedom from discrimination. Although the policy sought to enhance equal participation among men, women, girls and boys in education and other thematic areas, textbook reviews have suggested that while representation of women has increased and overt sexism has been reduced, more subtle issues around gender roles and representations are evident. Gender imbalances and stereotypes continue to be prevalent in the textbooks used in educational systems throughout the world in general and Kenya in particular. There is a mismatch between gender parity policies and the gender identity

representations on the ground. Subtle gender imbalance as expressed in visual images in textbooks could entrench similar imbalances in real-life situations. Thus, there is a need a study of these images to uncover the inherent gender imbalance patterns to help raise teachers and students awareness in English learning situations. Owing to the centrality of the textbook in the teaching and learning English, and in realization that gendered images are a central mode in them, this paper explores the representation of gender identity in the visuals in selected English textbooks used in secondary schools in Kenya from a socio-semiotic perspective.

LITERATURE REVIEW

One of the aspects of gender-based studies on textbooks focuses visual images. Such studies are anchored on the framework by Kress and Van Leeuwen (1996; 2006) that advances the view that all visual codes serve several communication functions including representational, interactive and compositional. The representational metafunction is concerned with images that represent the inter-relationships between things, people and places. On the representational metafunction, the visual is encoded by narrative and conceptual elements. In their theory, the grammar of visual design, they emphasise that both visual and verbal structures can be utilized to express meanings from common cultural sources. In their view, visual structures are representative of particular interpretations of experience and forms of social interactions.

Kress and Van Leeuwen (2006) further highlight four narrative roles that participants may play: the actor role where the participants perform an action to another person; the goal role in which the participants receive an action from another participant; or the behavior's role where participants are seen as responding to the effect of the concrete or verbal actions of an actor. In the fourth role, a participant can be a reactor to a receiver of an action or a given situation. The authors note that the gender that takes the actor's position is regarded as more important than the one who occupies the goal position.

According to Kress and Van Leeuwen (2006), a text comprises of three interactive elements: the image act, social distance and the point of view. The image act is concerned with the gaze direction participants involved. When the gaze focuses on the viewer it denotes a demand but when trained away from the viewer it suggests an offer. Demands have the potential to establish an imaginary relationship with participants (Stoian, 2015) and may either inform the viewers on something or order for attention from the viewers. However, in a visual that makes an offer, the participant is expressed looking away from the viewer. The image act that is chosen can imply relations of engagement or of detachment between the participants. Again, if all the participants are gazing at the same thing, this implies that they have common goal. Further, the unaccompanied participants in a visual are interpreted as being more powerful than those in the company of other participants. That is, how representational and interactive processes interact to come up with a purposeful whole (Kress & Van Leeuwen, 2006). Borrowing from this view, the current study utilized the aspects on framing and positions of the elements of the compositional mode to analyse how gender is represented through visuals in selected English textbooks.

Previous studies focusing on gender stereotypes in images found in language and literature textbooks revealed gender bias (Magno & Silova, 2007; Luengo & Blazquez, 2004; Soda & Murkowski, 2007). The textbooks displayed gender stereotypes and gendered roles. It is, however, notable that topical issues on the position of women in relation to gender in textbooks are gaining momentum in Europe (Luengo & Blazquez, 2004; Soda & Murkowski, 2007; Magno & Silova, 2007).

The visual aspect of gender representation in course books has attracted a spate of interest among researchers (Dewi, 2019; Dabbagh, 2016; Yasin, 2012; Marefat & Marzban, 2014; Ena, 2014; Damayanti, 2014). The studies have delved into pedagogical representation of visual images in EFL textbooks within the framework of Kress and Van Leeuwen (2006) revealing misrepresentation in the visual images in textbooks in terms of

authorship, visibility of characters and firstness in occurrence of characters. These studies have also shown that men were over-represented in the textbooks. Further, in visual representation, images of male participants were more than the females'. Also, image analysis revealed gender stereotypes in sharing of roles where females are depicted as house wives and executing such roles as taking care of young ones and undertaking household chores. In contrast, men are portrayed undertaking outdoor activities. Further, the studies show that the visual mode complements the verbal discourse in underrepresenting the females and limiting their visibility, and that females are more dependent than males, and are admirers of action carried out by the males. In other studies on visual images in textbooks, (Chipoda & Wassermann, 2015; Nunoo, Mensah, Boahen & Nunoo, 2017), women were underrepresented and were confined to domestic roles while males were assigned more occupational roles.

A study by Gray (2007) revealed that images such as guns, fast cars, outdoor activities, and expensive suits are associated with males. The same study also indicated that the images that contain females are softer and surrounded by music, make-up or pretty dresses. Gray concludes that such inappropriate representation of women is generally understood as discrimination against women based on gender. The same pattern emerges in a text titled 'Connections' in which majority of the fictitious characters are overwhelmingly male (Igavie, 2009 & Gray, 2007). Other studies investigating the gender representation in course books include Kobia (2009) and Mathuvi, Ileri, Mukuni, Njagi & Karugu (2012). In the studies, stark gender imbalances emerge in such aspects as authorship, editorship, and photographs that were mostly male-oriented. It is evident from the exiting literature that gender representation in learning materials has attracted a spate of interest among researchers from different disciplines. Since the Kenya Constitution (2010) advocates for gender balance in all spheres and given the National Policy on Gender and Development (NPGAD) was established in 2018, it would be of interest to stakeholders in the education sector to

determine how approved textbooks of English represent gender.

METHODOLOGY

The study applied the explanatory sequential research design (Creswell & Plano Clark, 2011). In this study, we first analysed gender representation in visual signs quantitatively and then built on these findings by qualitative explanations. The design is considered explanatory because the initial quantitative data results are explained further with the qualitative data while the design is regarded sequential because the inceptive quantitative stage is superseded by the qualitative stage. According to Edmonds and Kennedy (2017), the design is used when the researcher is interested in following up the quantitative results with qualitative data. By fusing the two paradigms, qualitative data subsequently interprets and clarifies results from quantitative data analysis in a complementary relationship which serves to not only broaden but deepen the Study (Maroko et al. 2019; Maroko, 2021). Due to space constraints, part of our study which is reported in this paper covers the quantitative strand while the excluded part deals with the qualitative part.

Our objects of study were English textbooks approved by the Kenya Institute of Curriculum Development (KICD) for use Kenyan Secondary schools. In the Kenyan basic education system, approved textbooks are the main materials for use by both teachers and students in teaching and assessment. It was of interest to us to analyse visuals in these texts to uncover patterns of gender representation that could implicitly or explicitly be picked by primary users of these texts. The target population consisted of all four English textbooks used in secondary schools under the Secondary Education Quality Improvement Project (SEQIP). The purposive sampling method informed by such inclusion variables as approval by KICD, use in secondary schools, and use in the teaching of English yielded the following texts as sources of visuals for study.

- 1) *Secondary English: An Integrated Approach Students' Book 1* (Third Edition)', published by Kenya Literature Bureau (KLB)

- 2) *Secondary English: An Integrated Approach Students' Book 2* published by Kenya Literature Bureau (KLB)
- 3) *Secondary English: An Integrated Approach Students' Book 3* published by Kenya Literature Bureau (KLB)
- 4) *New Horizons in English: A Course for Secondary Schools Students Book 4'* published by East African Educational Publishers Ltd.

A document analysis guide derived from the model for analyzing visual images by Kress and van Leeuwen (2006) was employed in the analysis of quantitative data from the visual images in the four textbooks. The document analysis guide was constructed around such variables as the number of visuals with male characters only, those with female characters only, visuals with both males and females, aggregate number of males in visuals with both males and females, and aggregate number of females in the same mixed gender visuals. Quantitative data on portrayal of either gender were generated and grouped into representational, interactive and compositional metafunctions (van Leeuwen, 2005). Statistical data arising from the document analysis process were summarized into frequency tables, interpreted and explained with the help of the guiding theory and other related literature. It is this quantitative analysis which in our study was followed up by qualitative to inject meaning to the figures in line with the dictates of the explanatory sequential design. In other words, the quantitative data arising from document analysis provided the contextualization needed for qualitative explanation (Maroko, 2021).

RESULTS AND DISCUSSION

Quantitative Analysis of Visuals

Guided by the framework for analyzing visuals by Kress and van Leeuwen (2006), our first focus was the determination of patterns of occurrence of male and female characters in the selected textbooks. Occurrence patterns are identified as visibility (Stokade, 2006, Birjandi 2012) which shows the exclusion of one gender

or the other. Visibility data was summarized in Table 4.1.

Table 4.1 Quantitative Analysis of Visuals

FORM	Gender Representation in the Visuals			
	Number of Males		Number of Females	
	Male only visuals	Mixed gender visuals	Female only visuals	Mixed gender visuals
ONE	10	83	2	46
TWO	5	79	5	38
THREE	9	107	1	87
FOUR	9	101	4	40
TOTAL	33	370	12	211
%	73.33	63.68	26.70	36.32

Single Gender (N) – 45

Mixed Gender (N) - 581

Visibility patterns in Table 4.1 demonstrates that visuals involving males only were 33 (73.33%) out of 45 while visuals with females only were less than half at 12 (26.70%). Still under visuals involving the mixed gender, there were more males at 370 (63.68%) than females at 211 (36.32%). From these numbers, males are the more dominant gender in the selected English textbooks used at the four levels of Kenyan secondary schools. Such representational imbalance suggests that males are considered more superior than females. Porreca (1984) avers that when men appear more than women in a text then women are not as important as men, or that their accomplishments are not worthwhile to mention. A study by Barton & Sakwa (2012) focusing on textbooks also found that females were underrepresented in the illustrations at 20.7% compared to males at 79.3%. An aspect of sexism in terms of female and male visibility is therefore imminent. According to Fatemi, Pishghadam, & Heidarian, 2011 & Giaschi, 2000), one of the elements in textbooks which has gained attention and has been found to contribute to gender bias and stereotypes is the visual element which projects what Sunderland (2000) calls exclusion of the female gender. The results in Table 4.1 are in line with Huang’s (2009) study where there was gender imbalance in the illustrations of the junior high school English textbooks in Taiwan that favored males. A study of the ILI textbook by Marefat & Marzbarn (2014) also indicated males

are more visible, depicted as new information and focus of attention and active doers while female is invisible and underrepresented. This contrasts with Yang’s (2011) study, which showed that primary school textbooks did not manifest substantial prejudicial stance towards males or females. In Yang’s study, females were as visible as males, with more female characters appearing in illustrations and more utterances spoken by females. Another study that gives contradictory findings to the current study’s interpretation is Nagatomo’s (2010) study on *Conversation Topics for Japanese University Students* where female characters were more visible and seemed to play more active roles than male characters. They had a visual majority by appearing in 62% of the illustrations that included people unlike this study where their appearance was only 28.4%. This suggests contextual differences in the manner in which males and females are viewed.

Representational Metafunction

According to Kress & van Leeuwen (2006), the representational metafunction comprises the attributes of gaze and social distance. Beginning with gaze, the eye direction of participants matters within Kress & Van Leeuwen’s socio-semiotics theory. It determines the ideology behind gender presentation in text images is. Accordingly, the participants may look at the viewer; look away from the viewer or gaze neither at the viewer

nor to each other. Using these attributes, trends on the gaze by male and female participants in

the selected textbooks were elicited and summarized in Table 4.2.

Table 4.2: The Gaze of Female and Male Participants

Description of Gaze	Males		Females	
	# of occurrences	%	# of occurrences	%
FORM 1				
Toward the viewer	10	1.86	1	1.19
Towards each other	25	4.64	18	3.34
Neither to the viewer nor to each other	25	4.64	11	2.04
FORM 2				
Toward the viewer	12	2.23	4	0.74
Towards each other	20	3.71	8	1.48
Neither to the viewer nor to each other	51	9.46	33	6.12
FORM 3				
Toward the viewer	11	2.04	9	1.67
Towards each other	67	12.43	54	10.02
Neither to the viewer nor to each other	29	5.38	21	3.90
FORM 4				
Toward the viewer	2	0.37	0	0.0
Towards each other	66	12.24	17	3.15
Neither to the viewer nor to each other	23	4.27	22	4.08
Σ	341	63.27	198	37.73

N - 539

In terms of the cumulative number of gazes, males made 341 gazes representing 63.27% while females made 198 gazes translating to 37.73%. Specifically, males made 35 cumulative gazes to the viewer while females made less than half gazes to the viewer at 14. According to gazes at each other, 178 cumulative gazes involving males were made in the visuals compared to 97 among females. Gazing at each other is called the direct gaze which according to Hietanen et al., (2008) elicits higher levels of autonomic arousal than averted gaze. Where gazes were neither directed at the viewer nor at each other (also called the averted gaze), 128 cumulative cases were identified among males compared to 87 among females. While the incidence of gazes among females was generally lower among females than

among males, majority of the females' gazes were in the category where they looked at each other at 97 and where they neither gazed at the viewer nor at each other at a frequency count of 87.

Among the males, the same pattern emerged with 178 and 128 gazes respectively. Gaze is an important aspect in social cognition. In a study by Dyler (1992), males in secondary English books gazed at the viewer more as compared to females. In Dyler's study, men generally do not like the femininity of gazing at the viewer as it is considered a passive action that suggests their weakness. Dyler (1992) notes that women may be projected as more passive objects of an active gaze than men may. According to Kress & van

Leeuwen (2006), when participants in a visual look at the viewers, they are making a demand and they want something from us. Since men, in the current study, more active in terms of gaze towards the viewer as compared to women, they can be seen as people who make demands from their viewers as opposed to females.

Turning to social distance, Macken-Horarik, (2004. p. 14) points out that it is the distance from which people, places and things are shown and creates a visual correlate of physical proximity in everyday interactions. Kress and van Leeuwen (1996) note that social distance is indicated by different sizes of frame namely: very close, close shot, medium close, medium shot and medium long. At very close shot, only the head or face can be seen while at close shot, heads and shoulders

are included. At medium close, participants are shown from waist up but at medium shot participants can be seen from knee up. At medium long, the whole figure is shown and at long shot, the whole figure with the space around can be seen. Kress & van Leeuwen (2006) point out that extreme close shots create a sense of intimacy between the viewer and the represented participant, ensuring the participant is portrayed as if they were our lover or close friend, while long shots are impersonal, portraying participants as if they were strangers we might pass on the street. They observe, further, that the choice of distance between the situation of the image and the participants represented in the image can affect the social distance between the viewer and the participants. The findings on social distance in the current study are shown in Table 4.3.

Table 4.3. Social Distance among Male and Female Participants

S/D	FORM 1		FORM 2		FORM 3		FORM 4		Σ	%
	Males	Females	Males	Females	Males	Females	Males	Females		
V/C	6	5	2	1	2	5	2	2	25	4.69
C/S	1	0	10	11	12	2	4	0	40	7.50
M/C	6	4	24	14	16	15	16	6	101	18.95
M/S	11	8	8	6	10	9	12	2	66	12.38
M/L	20	11	24	9	11	18	42	23	158	29.64
L/S	19	9	13	8	47	25	14	8	143	26.83
Σ	63	37	81	49	98	74	90	41	533	100
%	11.82	6.94	15.20	9.19	18.39	13.88	16.89	7.69	100	

S/D - Social Distance V/C – Very Close C/S - Close Shot M/C – Medium Close
 M/S - Medium Shot M/L – Medium Long L/S – Long Shot
 N = 533

Table 4.3 indicates that Medium Close recorded the highest incidence at 158 (29.64%) followed by Long Shot at 143 occurrences representing 26.83% and Medium Close at a frequency of 101 (18.95%) in that order. It also notable that the variables Very Close and Close Shot recorded the lowest and second lowest occurrences at 25 (4.69%) and 40 (7.50%) respectively. In terms male-female differentiation, males recorded higher frequencies than females in most of the types of social distance. The fact that medium long and long shot recorded the highest incidence at a combined total of 56.47% suggests that both males and females are attracted to engagements which are more formal than

informal. It was however interesting to note that medium close which tends towards the more intimate end recorded relatively higher occurrences than the neighbouring medium shot and close shot, making it to appear like an outlier.

Some work on the relationship between social distance and gender reveal how imbalance is subtly expressed in texts. For instance, Chandler (1998) notes that zooming into a close-up from a semiotic perspective can enhance the importance of a person. Thus, by giving males more close-up images than the females appears to render them more powerful than the other gender. The images in the selected texts showed a more socially

important face of men in comparison with women who appeared more in medium and long shots. Kress and van Leeuwen (2006) identify three levels of formality style. These are personal style, the language is implicit and context dependent; social style, whose language is more standard in terms of syntax and lexis; and public style where language is articulated more formally and consciously. The three levels of formality also describe the gender identities of males and females in the selected textbooks.

visuals. Kress & Van Leeuwen (2006) note that items to the left side of depicted images are perceived as old information while those put on the right side are considered as new information. The elements at the top are considered as either ideal or offering a promise as those to the bottom are considered as real or facts. Table 4.4 summarises trends on positioning of elements in the selected visuals.

Compositional Metafunction/Place of Positioning

Another aspect of visuals in our study was compositional metafunction or place of positioning. Compositional metafunction is, how representational and interactive processes interact to come up with a purposeful whole (Kress & Van Leeuwen, 2006). Our study focused on framing and position of the elements of the compositional mode to analyse how gender is represented in the

Table 4.4: Compositional metafunction/ Place of Positioning

Positioning	Males		Females	
	# of occurrences	%	# of occurrences	%
FORM 1				
Right side	33	6.29	19	3.62
Left side	15	2.86	14	2.67
Bottom	3	0.57	2	0.38
Top	9	1.71	1	0.19
FORM 2				
Right side	27	5.14	19	3.62
Left side	31	5.90	8	1.52
Bottom	11	2.10	6	1.14
Top	9	1.71	6	1.14
FORM 3				
Right side	31	5.90	24	4.57
Left side	31	5.90	25	4.76
Bottom	12	2.29	14	2.67
Top	24	4.57	17	3.24
FORM 4				
Right side	33	6.29	18	3.43
Left side	42	8.00	15	2.86
Bottom	10	1.90	4	0.76

Top	7	1.33	5	0.95
Σ	328	62.48	197	37.52

N = 525

Patterns in Table 4.4 show that males assumed more positions at 328 (62.48%) than females at 197 (37.52%). It is notable that males registered more occurrences in each of the four positions than females. Accordingly, there were more male images on the right side at a cumulative total of 124 (23.62) against 80 (15.24) among females. On the left side, there were 119 (22.66%) male images against 62 (9.81%) females. Similar trends are noted on the bottom side with male images occurring 36 (6.86%) times compared to females at 26 (4.95%) times. The top side displays similar results with male images recording a frequency of 49 (9.32%) compared to females at 29 (5.52%).

The positioning of the elements against each other gives crucial details about the images. The elements on the left side of images are perceived as old information while those put on the right side are considered as new information. The elements at the top are considered as either ideal

or offering a promise. The depicted elements at the bottom are considered as real or facts. All these attributes seem to favour the male gender more compared to the female gender.

Actional Processes of the Visuals

We also examined the actional processes of the visuals in the selected textbooks. Following, Kress & van Leeuwen (2006) four roles of actor, goal, behavior and reactor were used to stratify actional processes in the selected visuals. An actor is a participant who is represented as doing something to another participant (in this case, a goal) while a goal is a recipient of an action by an actor. A behavior performs a non-transitive action such as smiling or running in response to an action by another participant while a reactor is a participant who responds by the direction of a gaze to a model, object, or situation. The results from the selected textbooks are illustrated in Table 4.5.

Table 4.5: Actional Processes of the Visuals

Functional Role	Males		Females	
	# of occurrences	%	# of occurrences	%
FORM 1				
Actor	22	3.83	5	0.87
Goal	20	3.48	13	2.26
Behavior	13	2.26	11	1.92
Reactor	14	2.44	1	0.17
FORM 2				
Actor	11	1.92	9	1.57
Goal	31	5.40	11	1.92
Behavior	34	5.92	20	3.48
Reactor	5	0.87	1	0.17
FORM 3				
Actor	30	5.23	14	2.44
Goal	49	8.54	52	9.06
Behavior	27	4.70	19	3.31
Reactor	21	3.66	0	0.00

FORM 4				
Actor	31	5.40	8	1.39
Goal	41	7.14	15	2.61
Behaver	29	5.05	14	2.44
Reactor	1	0.17	2	0.35
Σ	379	66.03	195	33.97

N = 574

Table 4.5 shows roles assigned to males in the sampled images were twice as many as those assigned to females at 379 (66.03%) and 195 (33.97%) respectively. It is also notable that the frequency of each of the four roles was higher among males in the selected images than females. In particular, there were 94 (16.38%) males assigned the actor role compared to 36 (6.27%) females assigned the same role. Similarly, there were 141 (24.56%) goal roles assigned to males compared to 91 (15.85%) females given the same role. The same trend is reflected in the behavior role with males having a frequency of 103 (17.93%) compared to females at 64 (11.15%). Lastly, in the reactor role, male images played the role 69 (7.14%) times against female images at 4 (0.69%). The higher frequency of actor roles assigned to the male gender in this study corroborates with Marefat & Marzban (2014) finding that males assign themselves the role of actor. In another research, Danova (2006) showed that female images had a higher frequency of goal roles than male images to indicate that females always take the submissive role in the society. In our study, it was interesting to note that more male images were assigned the goal role than female images. Our findings also differ from Berger's (1979) study which found that women appeared as reactors while men were the actors in images and that women are the passive participants of the society performing executive roles. This is in contrast to

our study which shows that although reactor role registered the lowest incidence in the study data, more males were assigned the role than females at 69 (7.14%) and 4 (0.69%) respectively. There is therefore need to extend research in this area to hear the current thinking of the material developers about the apparent reversal of roles.

Realization of Vectors in Visuals

In the study of visuals, vectors are an important aspect as they define social relations. According to Van Leeuwen (2005) and Kress & van Leeuwen (2006), vectors can determine four types of relationships namely non-transactional, transactional, unidirectional and bi-directional. A non-transactional relationship occurs when a participant is presented as doing things alone in visuals while a transactional relation occurs when a participant is doing something to a goal or another participant. A unidirectional relation occurs when only one participant does something to another without reciprocation while a bi-directional relation presents when a two-way vector links two or more people. According to Kress & van Leeuwen (2006, p.59), "when participants are connected by a vector, they are represented as doing something to or for each other." The representation of vectors in the study data is summarized in table 4.6.

Table 4.6: Representation of Vectors in Visuals

Type of Vector	Males		Females	
	# of occurrences	%	# of occurrences	%
FORM 1				
Non-transactional	10	3.60	8	2.88
Transactional	3	1.08	0	0.00

Unidirectional transactional	11	3.96	7	2.52
Bidirectional transactional	6	2.16	0	0.00
FORM 2				
Non-transactional	26	9.35	13	4.68
Transactional	4	1.44	1	0.36
Unidirectional transactional	9	3.24	4	1.44
Bidirectional transactional	16	5.76	7	2.52
FORM 3				
Non-transactional	16	5.76	6	2.16
Transactional	15	5.40	9	3.24
Unidirectional transactional	5	1.80	4	1.44
Bidirectional transactional	9	3.24	8	2.88
FORM 4				
Non-transactional	11	3.96	15	5.40
Transactional	21	7.55	4	1.44
Unidirectional transactional	5	1.80	3	1.08
Bidirectional transactional	11	3.96	11	3.96
Σ	178	64.03	100	35.97

N = 278

Patterns in Table 4.6 reveal that cumulatively males had more transactional relationships at 178 (64.03%) compared to females at 100 (35.97%). The incidence in each of the four types of relations was higher in male images than female images. Specifically in the non-transactional type, male images had a representation of 63 (22.66%) while female images had 42 (15.12%). A non-transactional relation occurs when action has no Goal and "is not 'done to' or 'aimed at' anyone or anything"(Kress & van Leeuwen, 2006, p.63). In the transactional category, males had 43 (15.47%) occurrences against 14 (5.04%) among females. The unidirectional relation displayed 30 (12.96%) and 18 (6.48%) occurrences for male and female images respectively. The same trend emerged in the bi-directional relation with 42 (15.12%) and 26 (9.36%) for male and female images respectively. From the cumulative scores, it is clear that males are more prone to doing something for the other gender than females.

Berger (1972) notes that in traditional societies, males and females have different types of social orientation. Berger further notes that males are perceived as great and this is pegged on the degree of power they provide. The power is normally in moral, physical and economic forms.

Several years after Berger's work, it appears that the same gender imbalance characterizes the representation of visuals in textbooks. Perhaps with feminist movements working at narrowing the male-female gap in various aspects of life, the presence of females could conceivably be displayed more equally over time.

CONCLUSION AND RECOMMENDATIONS

In conclusion, the current study's findings affirms other many preceding research on gender portrayal in textbooks and other curricular materials. These results reveal that notable gender disparities are still immense and prevalent. Typical, prototypical, and prejudicial visuals and understanding of gender recognition is still rife in these textbooks. Female characters are underrepresented in these textbooks. Further an ideology of gender identity and superiority is imminent in the English textbooks in this study. The findings of this study have uncovered the subtle gender imbalance ideologies expressed through textbooks. This knowledge is good for raising the consciousness of teachers and students who use these texts by exposing the subtleties. It will be possible for teachers and students to resist

the temptation of projecting these gender stereotypes in real life situations. Further, arising from the outcome of this study, authors, designers and illustrators should continually and consciously address gender bias in the English textbooks to ensure fair gender representation. The findings of this study could also be of use to the Kenya Institute of Curriculum Development (KICD) in improving the textbooks evaluation matrix by basing it on gender parity paradigms. The improved evaluation matrix could be used to revise textbooks currently in use and guide in the development of new ones.

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