

Teachers' Self-efficacy Beliefs: The Relationship between Gender and Instructional Strategies, Classroom Management and Student Engagement

Frederick Kwaku Sarfo

*Faculty of Education and Communication Sciences, College of Technology
Education, University of Education, Winneba, Kumasi*

Email: sarfofred2001@yahoo.com

Francis Amankwah

*Department of Educational Leadership, College of Technology
Education, University of Education, Winneba, Kumasi*

Email: francisamankwah2@gmail.com

Francis Kwame Sam

*Department of Educational Leadership, College of Technology
Education, University of Education, Winneba, Kumasi*

Email: papasam@gmail.com

Daniel Konin

Admissions Office, College of Technology Education, University of Education, Kumasi

Email: getkonin@gmail.com

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Abstract

The study investigated the relationship between gender and self-efficacy beliefs in instructional strategies, classroom management and student engagement among senior high school teachers in Kumasi metropolis, as most previous studies tend to focused on the developed countries other than developing countries like Ghana. Specifically, descriptive survey design was used to determine the levels of self-efficacy beliefs among the teachers and the relationship between gender and teachers' self-efficacies were also ascertained. The sample included 259 male and 178 female teachers who were randomly drawn from both private and public senior high

schools. Teachers' Sense of Efficacy Scale (TSES) was used to collect data from the respondents. Data collected were analysed using descriptive and inferential statistics. Results indicated that generally teachers have relatively higher self-efficacy beliefs especially at the student engagement aspect. It was found that male and female teachers differed in relation to their instructional strategies with female teachers on average have better instructional strategies efficacy than male teachers. On contrary, both male and female teachers did not differ in terms of classroom management and student engagement efficacies. Based on these findings, it was recommended that teacher training institutions should emphasise the teaching of instructional practices, student engagement and classroom management practices to the teacher trainees so as to improve their efficacies level.

Keywords: Teachers' Self-efficacy beliefs, Gender, Instructional Strategies, Classroom Management, Student Engagement

INTRODUCTION

Throughout the world, it appears that there is general consensus among educators and researchers about the fundamental role that teachers play in teaching and learning process. Both theoretical and empirical studies have considered the importance of teachers in ensuring effective and efficient teaching and learning (Gurbuzturk & Sad, 2009; Nejati, Hassani, & Sahrapour, 2014; Shaukat & Iqbal, 2012; Tschannen-Moran & Woolfolk Hoy, 2001). In view of this, one major reason that influences the progress of any educational system is by employing highly qualified teachers. These qualified teachers must possess some distinct qualities, and having high self-efficacy is one of them (Caprara, Barbaranelli, Steca & Malone, 2006). The implication is that teachers with high self-efficacy should be employed to facilitate effective teaching and learning in the classrooms.

Bandura (1977) noted that self-efficacy beliefs have a great impact on people's cognitive, motivation, affective and selection processes. Since its introduction, the construct of self-efficacy has been conceptualised as a significant variable for predicting an individual's behaviour (Bandura, 1977). According to Tweed (2013), expectations of self-efficacy determine whether instructional actions will be initiated, how much effort will be put into the action, and how long the action will be sustained in the face of challenges and failures. Once an action is taken, highly self-efficacious people invest more effort and persist longer than those with low self-efficacy. In the opinion of Bandura (1977:53), "people's beliefs in their efficacy affect almost everything they do: how they think, motivate themselves, and behave."

In educational settings, teacher self-efficacy can be conceptualised as an individual teacher's beliefs in his or her ability to plan, organise, and carry out activities that are required to attain educational goals (Skaalvik & Skaalvik, 2010). On their part, Tschannen-Moran and Woolfolk Hoy (2001) observed that teacher self-efficacy is a teacher's

judgement of his or her capability to bring about desired outcome of student engagement and learning. Bandura (1997: 243) posited:

Teacher's perceived efficacy rests on much more than the ability to transmit subject matter. Their effectiveness is also partly determined by their efficacy in maintaining an orderly classroom conducive to learning, enlisting resources and parental involvement in children's academic activities, and counteracting social influences that subvert students' commitments to academic pursuits.

Bandura (1995) explained that teachers' beliefs about their efficacy can be developed from four main sources of influence. These sources are: (1) mastery experiences with which individuals can gauge their capabilities; (2) vicarious experiences that give individuals comparison information to use in judging their competence; (3) social persuasions that others might use to help convince an individual that he/she possesses the ability to perform a certain task; and (4) physiological and emotional states that serve as another indicator of capability. These four informative principal sources provide a framework for theoretical and empirical studies on teachers' self-efficacy beliefs.

Literature on Gender and Teacher's Self-efficacy Beliefs

Teachers' Self-efficacy Belief

Self-efficacy, which has been described as an important construct has a great impact on teachers' motivation and personal accomplishments (Gorozidis & Papaioannou as cited in Tweed, 2013). According to Tweed (2013), teachers with low self-efficacy appear to have low self-esteem and harbour pessimistic thoughts concerning their ability to accomplish tasks. Thus, self-efficacy levels of teachers can affect motivation. "It is important to note that self-efficacy is a motivational construct based on self-perception of competence rather than actual level of competence" (Tschannen-Moran & Woolfolk Hoy, 2007: 946). Bandura (1995) postulated that teachers who perceive task as difficult will be slow to embrace the task. This implies that the self-efficacy of a teacher could have a greater impact on how successful he/she is at implementing instructional strategies, managing classroom and engaging students.

Thus, teachers' perceived self-efficacy is not an assessment of their skill set, but rather a belief about what they can or cannot accomplish under various circumstances, given the skills they do possess. Self-efficacy belief act as a mediator between individual teacher's knowledge of their skills and their future actions. Consequently, when compared to their non-efficacious counterparts, efficacious individuals are likely to avoid challenging activities that might exceed their capabilities, are less likely to extend more effort and persist longer in the face of difficulty and are less likely to dwell on personal shortcomings or see potential challenges as more difficult than they really are (Bandura, 1986). Teachers with a high sense of efficacy feel a personal accomplishment, have high expectations for

students, feel responsibility for student learning, have strategies for achieving objectives, a positive attitude about teaching and believe they can influence student learning.

Given the specific nature of efficacy beliefs, according to Bandura (1997), measures must be modified to specific activity-oriented domains and represent varying degrees of task demands with those domains. In this study, Teacher Self-Efficacy Scale (TSES) developed by Tschannen-Moran and Woolfolk Hoy (2001) was utilized. This scale measured teachers' sense of efficacy beliefs in three separate learning constructs: instructional strategies, classroom management and student engagement.

Over the past years, several researchers have conducted and published articles reporting teachers' self-efficacy. Nejati, Hassani and Sahrpaur (2014) examined the relationship between gender and subscales of self-efficacy of Iranian English as Foreign Language (EFL) teachers. The study which sampled 34 EFL drawn from private English language institutes in Karaj were asked to respond to Teachers' Sense of Efficacy Scale. After data analysis by the researchers, it was revealed that male and female teachers did not differ as far as classroom management was concerned. However, they differed in terms of student engagement and instructional strategies; male teachers were better at student engagement while female teachers were better at instructional strategies. Wolf, Foster and Birkenholz (2010) conducted a study to assess the relationship between self-efficacy of agricultural education teachers' in USA. The population for the study included the entire cohort (n = 24) of teacher candidates during the 2007 fall quarter at the Ohio State University. Teacher self-efficacy was measured using the Teacher sense of Efficacy Scale developed by Tschannen-Moran and Woolfolk Hoy (2001). Results indicated that teachers reported high levels of self-efficacy at the end of the experience. More so, teachers were found to be most efficacious about classroom management, slightly less efficaciously about instructional strategies and the least efficacious about student engagement.

In investigating the relationships between high school teachers' wellbeing and their efficacy, Mehdinezhad (2012) reported a relatively high score on teachers' efficacy. Bruce, Esmonde, Ross, Dookie, and Beatty (2010) concluded that research in the field of teacher efficacy beliefs has provided key information which shows that high self-efficacy teachers are more likely to persevere in their attempts to reach learning goals when they encounter obstacles, are more prone to experiencing with effective instructional strategies that represent a challenge and are more willing to run risks in their classrooms.

Gender and Teachers' Self-efficacy Beliefs

A vast array of conflicting research findings exists on the effect that gender has on self-efficacy. Some research studies indicated relationship between teachers' sense of self-efficacy and gender (Gurbuzturk & Sad, 2009; Hamurcu, 2006; Tabak, Akyildiz & Yildiz, 2003), whilst other studies found no differences in teacher self-efficacy by gender at all (Chacon, 2005; Cubukcu, 2008; Karimvand, 2011; Mitchual, Donkor & Quansah, 2010). For instance, in Ghana, Mitchual et al. (2010) conducted quantitative research into the

effect of gender on self-efficacy beliefs of pre-service teachers. The results indicated that the overall self-efficacy beliefs of pre-service teacher interns do not significantly differ according to gender. Karimvand (2011) investigated the effects of teachers' gender and their interaction effects on Iranian EFL teachers' sense of self-efficacy. Through regression analysis, it was found that gender had no significant interaction effect on the participants' efficacy. Chacon (2005) reported no relationship between teachers' self-efficacy and gender in a study that examined perceived efficacy among English foreign language teachers in middle schools in Venezuela. Similarly, Cubukcu (2008) investigated correlation between self-efficacy and foreign language who found teachers' self-efficacy beliefs do not differ significantly in terms of gender. On the other hand, Tabak et al. (2003) reported higher levels of self-efficacy beliefs among female teachers than their male colleagues. Similarly, in investigating the effects on teachers' self-efficacy and job satisfaction in terms of gender, Klassen and Chiu (2010) found that female teachers have lower teacher self-efficacy in the area of classroom management but not in instructional strategies and student engagement. Gurbuzturk and Sad (2009) observed that male and female participants' self-efficacy levels differed significantly. Female participants' were found to have slightly higher self-efficacy scores than those of male participants. Hamurcu (2006) found a significant difference in favour of female teachers in a study assessing candidate class teachers' self-efficacy beliefs about science teaching.

Shaukat and Iqbal (2012) investigated teacher self-efficacy as a function of student engagement, instructional strategies and classroom management. Specifically, the study was designed to determine teachers' efficacy (efficacies in student engagement, classroom management and instructional strategies) in relation to gender. In all, 108 male and 80 female teachers were conveniently selected from four public schools in Lahore, Pakistan. Results showed no significant difference between male and female teachers on student engagement and instructional strategies but male teachers were likely to be significantly better in classroom management than female teachers. They therefore concluded that male teachers are more likely to manage their classroom better than female teachers. Similarly, Shaukat, Abiodullah and Rashid (2011) in a study observed that male teachers usually maintain stricter discipline in the classroom and control disruptive behaviours of students than what female teachers do.

From the review, it is not clear that the findings on the influence gender have on teachers' self-efficacy is fuzzy. Some studies revealed that there is no relationship between teachers' gender and their self-efficacy (Chacon, 2005; Cubukcu, 2008; Karimvand, 2011; Mitchual et al., 2010) and equally good number of studies reported that there is a relationship (Gurbuzturk & Sad, 2009; Hamurcu, 2006; Tabak et al., 2003). Even those studies that found the relationship between teachers' gender and their self-efficacy beliefs are inconclusive. Some of the studies reported that male teachers have stronger self-efficacy than their female counterparts whereas other studies indicated contrary observation (Gurbuzturk & Sad, 2009; Tabak et al. 2003). This current study addresses the issue again within the Ghanaian context, which is a new and different setting. Specifically, the thrust of this study is to examine the relationship between gender and subscales (instructional

strategies, classroom management and student engagement) of self-efficacy beliefs among senior high school teachers, as previous studies tend to focus on the European and American countries other than African countries like Ghana. Moreover, not too many studies have been conducted in Ghanaian context that looked at the relationship between gender and senior high school teachers' self-efficacy beliefs. Available local study conducted by Mitchual et al. (2010) focused on the effect of gender on pre-service teachers. The current study attempts to fill this research gap.

The current study seeks to find out the overall profile of senior high school teachers' self-efficacy beliefs and also to ascertain the relationship between gender and self-efficacy beliefs of senior high school teachers.

METHODOLOGY

The study adopted cross sectional design. According to Cohen, Manion and Morrison (2007), a cross sectional study is one that produces a 'snapshot' of a population at a particular point in time. Thus, it has to do with collecting data from research participants at a single point in time or during a single relatively brief time period and also data typically collected from multiple groups or types of people. The researchers used cross sectional design because of the self-reporting nature of what already exist as efficacy beliefs of senior high school teachers.

The target population for the study consisted of all senior high school teachers in Kumasi metropolis which was estimated to be 2500. The sample consisted of 450 teachers, thus 18% of the senior high school teachers in Kumasi Metropolis was selected through the use of simple random sampling. This was in line with the suggestion of Asamoah-Gyimah and Duodo (2005) that for quantitative studies, a sample size of 10% to 30% of the population size is sufficient for generalisation purpose. The study sample of 450 senior high school teachers dispersed across the whole range of gender, age, school type, educational qualification and years in teaching.

The tool used for collecting data from the participants was questionnaire that consisted of introduction and two parts. The introduction part of the questionnaire briefly explained the purpose of the study and also informed respondents' about their participation in the study as voluntary and their responses would be treated as confidential. Part one provided five items that dealt with demographic information of respondents: age, gender, educational qualification, school type and years of teaching experience. Part two was Teachers' Sense of Efficacy Scale (TSES), developed by Tschannen-Moran and Woolfolk Hoy (2001). The TSES had 24 items which measured teacher efficacy beliefs in the areas of instructional strategies, classroom management and student engagement. An example of items from each of these three subscales respectively is "How much can you do to adjust your lessons to the proper level for individual students," "How much can you do to control disruptive behaviour in the classroom" and "How much can you do get through to the

most difficult students.” Teachers’ rated their perceived efficacy on a 5-point Likert scale from 1=“Nothing” to 5 “A great deal”

The instrument which was adopted from USA, hence its validity and reliability has to be re-established. Consequently, TSES was piloted on a group of teachers (n=35) at Mampong Municipality of Ashanti Region who were not part of the study. No ambiguous items were found, and reliability for the 24 items yielded Cronbach alpha of .943, indicating a good internal consistency. Moreover, the reliability coefficient for classroom instructional practices was .875, classroom management .862 and student engagement .884. According to Fraenkel and Wallen (2000), a reliability coefficient of 0.78 is acceptable. Based on reliability coefficient of 0.943 from the pilot test, the researchers accepted the instrument as reliable and appropriate for the study and continued its administration.

Prior to the administration of the research instrument, the researchers explained the purpose of the study to participants and they were assured that data collected from them will remain anonymous and that at anytime they could withdraw from the study. Thereafter, the questionnaires were personally distributed among the teachers in their respective schools. Respondents were given 30 minutes to respond to the items in the questionnaires. Four hundred and fifty questionnaires were administered and also retrieved but thirteen out of this figure were discarded due to incomplete data, thus 437 were found usable and consequently used in the analysis.

The responses from the respondents were scrutinised and entered into computer for computer analysis using SPSS 16.0 version. The data inputted were tabulated and compared using both descriptive and inferential statistics. The descriptive statistics was used to obtain some summary information on respondents’ age, gender, educational qualification, school type and teaching experience whereas inferential statistics were used for testing for differences which was set at 0.05 significant level. Specifically, independent sample t-test was employed.

RESULTS

This section presents the results of the study. The results are presented in Tables 1, 2 and 3 under the headings of demographic characteristics of the respondents, teachers’ self-efficacy beliefs and gender differences in teachers’ self-efficacy beliefs respectively.

Demographic Characteristics of the Respondents

Table 1 displays the demographic characteristics of the respondents sampled for the study.

Table 1: Demographic variables of the respondents (N=437)

S/N	Variables	Frequency	Percentage (%)
1.	Gender		
	Male	259	59.5
	Female	178	40.5
2.	Age in years		
	20-30	80	18.3
	31-40	185	41.9
	41-50	113	25.9
	51-60	60	14.0
3.	School type		
	Public	257	58.8
	Private	180	41.2
4.	Educational qualification		
	Bachelor's	297	68.0
	Master's	140	32.0
5.	Teaching Experience in years		
	1-5	200	45.8
	6-10	118	27.0
	11-15	47	10.8
	16-20	40	9.2
	21 and above	32	7.3

Source: Field survey, February 2015

From Table 1, out of 437 respondents, 259 representing 59.5% were males whereas 178 representing 40.5% were females. This means that majority of the respondents are males and this is a clear indication of the low representation of females at senior high school level of education. Moreover, the majority of the respondents 265, representing 60.2% were aged between 20-40 years. This result suggests that the sample for the study is relatively young. The type of school showed that 257 representing 58.8% were selected from the public schools while 180, representing 41.2% were from private schools. In terms of their educational qualification, 297 representing 68.0% were bachelor's degree

holders whereas 140 representing 32.0% were master's degree holders. The majority of teachers are having bachelor's probably because of the fact that the minimum academic qualification for teaching at the senior high school in Ghana is first degree level. Moreover, years of teaching experience of the respondents were also of interest to the researchers. From Table 1, majority of the respondents (318), representing 72.8% have taught between 1-10 years. The implication is that they have been in the teaching service for long years and could potentially use their working experience and knowledge to describe very well their self-efficacy beliefs.

Findings on the Teachers' Self-efficacy Beliefs

Teachers' self-efficacy was measured in terms of the instructional classroom strategies, classroom management and student engagement subscales in the Teachers' Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001). All 437 participants responded to all items in Teachers' Sense of Self-Efficacy Scale. Table 2 shows the teachers' mean scores with standard deviations of the three subscales.

Table 2: Teachers' Self-efficacy Beliefs

	Number	X	SD
Teachers' Sense of Efficacy	437	33.13	6.11
Instructional strategies	437	30.51	5.71
Classroom management	437	33.82	6.38
Student engagement	437	35.05	6.20

Note: X=mean, SD=Standard deviation

Source: Field survey, February 2015

Table 2 shows the teachers' mean scores with the standard deviations of the three subscales of self-efficacy beliefs. The teachers' scored the highest on the student engagement aspect ($X = 35.05$; $SD = 6.20$), followed by the classroom management aspect ($X = 33.82$; $SD = 6.38$) and lowest been instructional strategies aspect ($X = 30.51$; $SD = 5.71$). This means that teachers' efficacy for student engagement is higher than efficacy for classroom management and instructional strategies. Overall, teachers indicated relatively higher self-efficacy ($X = 33.13$; $SD = 6.11$).

Findings on the Gender Differences in Teachers' Self-efficacy

In order to determine any gender significant differences in the self-efficacy scores among the teachers, an independent sample t-test was conducted. The independent sample t-test scores are shown in Table 3.

Table 3: Gender Differences in Teachers' Self-efficacy Beliefs

Subscale	Gender	N	X	SD	df	t	Sig
Instructional strategies	Male	260	29.70	5.86	433	-2.374	.018*
	Female	177	31.32	5.61			
Classroom management	Male	260	31.87	5.84	433	-1.086	.278
	Female	177	35.77	6.92			
Student engagement	Male	260	36.75	6.46	433	-.686	.493
	Female	177	33.34	5.94			
TSES	Male	260	32.77	6.05	433	-1.459	.145
	Female	177	33.48	6.16			

Note: X=mean, SD=standard deviation, df= degree of freedom, t= t-test, Sig=Significant

* significant level 0.05

Source: Field survey, February 2015

From Table 3, the independent sample t-test results show no significant gender differences ($t(433) = -1.459$; $p = .145$) among the teachers' self-efficacy. Based on the descriptive scores, female teachers have relatively higher ($X = 33.48$; $SD = 6.16$) self-efficacy than their male counterparts. Furthermore, in terms of subscales, independent sample t-test scores reveal a statistically significant difference between male and female teachers in reference to their instructional strategies efficacy ($t(433) = -2.374$, $p = .018$). The descriptive statistics obtained as shown in Table 3, indicate that female teachers on average have a better instructional strategies efficacy ($X = 31.32$; $SD = 5.61$) than male teachers ($X = 29.70$; $SD = 5.86$). On the other hand, both male and female teachers did not differ in terms of classroom management and student engagement efficacies. However, based on the descriptive statistic scores, female teachers have a higher classroom management efficacy ($X = 35.77$; $SD = 6.92$) than male teachers ($X = 31.87$; $SD = 5.84$) whereas male teachers have better student engagement efficacy ($X = 36.75$; $SD = 6.46$) than their female colleagues ($X = 33.34$; $SD = 5.94$).

DISCUSSION

The study was conducted to determine the levels of self-efficacy beliefs among the senior high school teachers and also to ascertain the relationship between gender and teachers' self-efficacies. From the results presented in Table 2, teachers generally have a higher student engagement efficacy than the classroom management and instructional strategies aspects of self-efficacy scale. In terms of the overall teachers' sense of efficacy,

the results indicated a relatively higher mean score and this indicated that teachers had a better self-efficacy in devising instructional strategies, managing the classroom and as engaging students as well. The fact teachers' self-efficacy belief was found to be high indicated that they had a strong belief that adequate knowledge and skills of effective teaching behaviours with respect to instructional strategies, classroom management and student engagement. The finding is supported by the previous studies of Mehdinezhad (2012) and Wolf et al. (2010) who for example, in examining the relationships between high school teachers' wellbeing and their efficacy, reported a relatively high score on teachers' efficacy. This also supports the assertion made by Bruce et al. (2010) that teachers with higher efficacy levels are more likely to persevere in their attempt to reach learning goals when they encounter obstacles, are more prone to experiencing effective instructional strategies that represent a challenge and are more willing to run risks in their classrooms. The senior high school teachers are having higher efficacy beliefs due to various conferences, workshops and in-service training that Ghana Education Service (GES), Ghana National Association of Teachers (GNAT), National Association of Graduate Teachers (NAGRAT), Non-Governmental Associations (NGOs) and various subject associations frequently organise for its members which have helped in instilling confidence among them.

Moreover, the study revealed that there is no significant gender differences among them. This suggests that both male and female teachers at senior high schools in Ghana have the similar self-efficacy. This finding is line with previous results of Chacon (2005), Cubukcu (2008), Karimvand (2011), Mitchual et al. (2010) and Tweed (2013). For instance, Mitchual et al. found that the overall self-efficacy beliefs of pre-service teacher interns do not significantly differ according to gender. Similarly, Karimvand reported that gender had no significant interaction effect on the participants' efficacy. However, the current result shows an unparallelism with the study findings of Gurbuzturk and Sad, (2009), Hamurcu, (2006) and Tabak et al. (2003).

Regarding the gender differences of teachers' self-efficacy in relation to instructional strategies, classroom management and student engagement, Table 3 displayed that there was significant difference between the instructional strategies efficacy of male and female teachers in which female teachers on average have better instructional strategies efficacy than their male counterparts. This implies that female teachers are more likely to adjust their lessons to the proper level for individual pupils, implement alternative strategies in their classroom, provide appropriate challenges for every capable student, give an alternative explanation or example when students are confused, respond to difficult questions from their students, use a variety of assessment strategies, gauge students' comprehension of what they have taught and craft good questions for their students than their male teachers. This finding is consonance with previous studies of Klassen and Chiu (2010) and Nejati et al. (2014). For example Nejati et al. found significant relationship between gender and instructional strategies where female teachers reported better efficacy in instructional strategies than male teachers in a study conducted to examine the relationship between gender and subscales of self-efficacy of Iranian EFL teachers.

The possible reason for this finding can be found in the assertion made by Nejati et al. that female teachers are more attentive, accurate and organised than male teachers and as result, they usually attempt to have the best instruction. That is, “they are usually sensitive to teach effectively as they can and not to skip anything because they pay attention to details” (Nejati et al., 2014:1223).

Moreover, the study showed that male and female teachers did not differ in terms of classroom management and student engagement. The implication is that both male and female teachers have similar efficacies in classroom management and student engagement. This result therefore is consistent with previous finding of Nejati et al. (2014) who conducted a study to examine the relationship between gender and subscales of self-efficacy of Iranian EFL teachers and reported that male and female teachers did not differ as far as classroom management was concerned.

CONCLUSION

Teachers had a high self-efficacy and in relative terms, were found to be the most efficacious at student engagement, slightly less efficacious about classroom management and least efficacious about instructional strategies. The fact that teachers' self-efficacy beliefs were found to be relatively high implied that they had a strong belief that they had adequate knowledge and skills of effective teaching behaviours with respect to instructional strategies, manage classroom and engage students adequately.

Moreover, female teachers have a relatively high instructional strategy efficacy than male teachers suggest that male teachers are more likely to be less efficacious when it comes to the implementation of classroom instructional practices than their female counterparts.

It is recommended that teacher training institutions should emphasise the teaching of instructional practices, student engagement and classroom management practices to the teacher trainees so as to improve their efficacies level.

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