DO TEACHERS' ROLE BELIEFS CONTRIBUTE TO THEIR BELIEFS OF INCLUSIVE EDUCATION?

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Teachers' role beliefs reflect their innate core values in the profession of teaching. In this paper, the role beliefs of a sample of mainstream teachers in Saudi Arabia were investigated using a metaphoric approach. The teachers were asked to rate metaphoric statements that best reflected their role beliefs. From the responses provided by 44 mainstream teachers in this study, protective and facilitating role orientations were found to be more dominant among them as compared to behavioural and self-referencing role orientations. Subsequent analysis pointed to self-referencing role orientation as a salient predictor of rigid belief about teaching and learning and also negative belief about inclusive education. The findings offer empirical evidence that the salience of a non-constructive view of teaching and learning is a major hindrance for teachers to develop positive beliefs about inclusive education. On the other hand, teachers' beliefs about their roles in supporting students with learning difficulties to learn and develop knowledge are likely to go hand in hand with their positive beliefs about inclusive education.

Keywords: Role belief, inclusive education, metaphoric

INTRODUCTION

Beliefs are mental representations of reality that are closely related to personal emotions and experiences (Vidović & Domović, 2019). Teachers' beliefs can be understood as mental representations of phenomena, people and events related to the context of teaching, which teachers accept as true (Domović et al., 2017). Teachers' beliefs are known to impact on their identity formation and professional behaviours (Vidović & Domović, 2019). Teachers' beliefs are a multi-facet construct, which includes teachers' beliefs of their roles as teachers, their students, their teaching efficacy, and many other things. In this paper, two facets of teachers' beliefs will be scrutinised - teachers' role beliefs and teachers' beliefs of inclusive education. Teachers' role beliefs refer to teachers' beliefs about their role identify. A teacher's role identity is a construct of professional personality that is formed in the career of teaching (Karabay, 2016). It refers to how teachers recognise their roles in teaching, their values and assumptions in teaching and being a teacher (Farrell, 2015).

When teachers start their career as a teacher, they generally have some personal views of the meanings of being a teacher (Tas & Karabay, 2016). Such views can be interpreted as the beliefs of teachers' roles, which reflect the teachers' perceptions of responsibilities, competencies and tasks related to the career of teaching (Domović et al., 2017). The positive and negative views associated with teacher identity and role are generally the teachers' personal perceptions that stem from their early personal experiences as students and the numerous good

and bad teacher models they have observed (Karabay, 2016). Such views can be emotionally coloured and deeply rooted within the teachers' personal value systems (Karabay, 2016; Vidović & Domović, 2019). Therefore, teachers' role beliefs are hypothesised to be amongst the innate core constructs, which would impact how teachers perceive and select knowledge and approaches to teaching (Fry et al., 2009; Karabay, 2016). In comparison to teachers' beliefs about teaching and learning, teachers' role beliefs are surprisingly very minimally researched (Xin et al., 2020); even though a teacher's role belief can be considered as an innate element of 'heart' in teaching.

LITERATURE REVIEW

Sharma (2018) discussed the teacher education framework in inclusive education and cited the 3Hs model in teacher education, initially proposed by Shulman and Wilson (2004). The 3Hs in the model refer to 'heart' (believing), 'head' (knowing) and 'hand' (doing). According to Shulman and Wilson (2004), 'heart' in teaching covers the attitudes and beliefs in teaching. Sharma (2018) perceived that the 'heart' elements in the teaching profession are very closely influenced by teachers' personal experiences in the practice of teaching, and these elements are also culturally and religiously bound. Considering that belief and attitudinal elements are personal, innate, and the least subjective to change (Sharma, 2018), it is important that these elements are studied and understood in an effort to remedy the teachers' mindset and encourage them to embrace new educational philosophy and classroom practice as entailed in inclusive education movements (Portelli & Koneeny, 2018).

Teacher's Role Belief

Vidovict and Domivic (2019) posited that teacher's role belief is part of their identity formation, which has a strong impact on their professional behaviours and actions. Such perspective is in line with Korthagen (2017) professional growth model, in which enabling teachers to reflect on their core innate value levels is regarded as highly instrumental in helping them deal with their innate obstacles and transform their personal qualities into good teaching practices (Korthagen & Vasalos, 2010). In a large scale qualitative research, Vidovict and Domivic (2019) interviewed over two hundred pre-service teachers in Croatia. From their findings, they deduced four distinct orientations of teachers' role beliefs - behaviourist, facilitating, protective, and self-centred (or self-referencing) orientations.

Behaviourist orientation is associated with the belief that the teacher is an active agent who transmits knowledge to a passive learner, who then stores the knowledge in memory without further processing (i.e., knowledge, authority and shaper). Facilitating orientation is associated with the belief that the teacher is a facilitator of learning, while the learner is an active agent in the construction of concepts and meanings (i.e., guide). Protective orientation is related to the belief that the teacher is seen as a care provider who is responsible for creating an emotionally warm and safe learning environment (i.e., parent, friend). Lastly, self-referencing orientation is the belief associated with insecurity and doubt to fulfil the teaching role (i.e., does not know how to create a lesson, does not know how to perform better). In line with Vidović and Domović (2019) the term 'self-referencing' rather than 'self-centred' was adopted in this paper to avoid the relatively stronger negative denotation implied in the term 'self-centred.'

Vidović and Domović (2019) realise that 'protective' orientation was the most dominant orientation among the student teachers in a longitudinal study. However, its dominance gradually ceases in favour of 'facilitating' orientation among the student teachers' final year. In regards to this, Vidović and Domović (2019) perceive the dominant pattern of protective orientation in their study was associated with pre-professional, naive understanding of the teacher's role, which views teachers as substitute parents. Correspondingly, the gradual shift of protective orientation to facilitating orientation implies the gradual development of constructivist beliefs in teaching, as projected by Vidović and Domović (2019) in their study. However, Vidović and Domović's study is limited to data collected from student teachers. It remains unknown how these role beliefs would manifest among in-service teachers.

Metaphorical Representation of a Teacher's Role Belief

In recent years, a number of studies on a teacher's role belief were conducted by utilising metaphorical technique (Vidović & Domović, 2019; Domović et al., 2017; Wang & Yang, 2021; Xin et al., 2020). In these studies, teachers or student teachers were asked to complete unfinished sentences by focusing on a single metaphorical image, formulated as 'a teacher is like… because…'. This technique is derived from the cognitive theory of metaphor (Vidović & Domović, 2019), and it helps the researchers to uncover the connections between educational theories and personal beliefs among teachers and student teachers (Xin et al., 2020). In most past studies (Vidović & Domović, 2019; Domović et al., 2017; Wang & Yang, 2021; Xin et al., 2020), researchers presented an array of metaphorical images, which represented different familiar objects or events to teachers or student teachers and asked them to identify images that best represent their role beliefs (Vidović & Domović, 2019).

Xin et al. (2020) felt that the benefits of the metaphorical technique in investigating a teacher's role belief is that there are no right or wrong answers, and, therefore, issues of reporting socially desirable responses can be avoided. This technique also allows a more creative way of communicating instructional concepts (Saban, 2003) and presenting complex instructional concepts, such as the relationship of teachers and others (Thomson, 2016). Additionally, this technique allows the teacher to articulate in a less abstract manner by using metaphorical statements on how their beliefs develop and change over time (Tannehill & MacPhail, 2014). In particular, it is believed that the teachers' use of metaphoric language can provide insights into their beliefs, attitudes, and, therefore, practice (McGrath, 2006).

Beliefs About Inclusive Education

Another set of teacher beliefs investigated in this paper is teachers' beliefs about inclusive education. Following Metsala and Harkins (2020), in this paper, beliefs about inclusive education are seen as a three-dimensional construct, consisting of beliefs about roles and responsibilities, beliefs about teaching and learning, and negative beliefs about inclusive education. This construct was initially proposed by Glenn (2018), who viewed that the varying beliefs about teaching roles and responsibilities among teachers in inclusive education are closely related to their beliefs about teaching and learning. The latter refers to whether teachers believe that the ability to learn is fixed or fluid (Glenn, 2018; Metsala & Harkins, 2020), and this set of beliefs has tremendous implications on how teachers develop their skills and practices (Glenn, 2018). A closer examination of teachers' beliefs related to inclusion is paramount to the planning and delivery of inclusive education, as the finding provides insight into the mainstream teachers' thinking as they teach students with learning difficulties in inclusive classrooms (Ismailos et al., 2019).

Inclusive Education in The Kingdom of Saudi Arabia

In Saudi Arabia, terms such as Al-Idmaj, Al-Indemaj, and Al-Damj have been used to refer to inclusion (Khochen-Bagshaw, 2020). In recent years, the educational authorities in Saudi Arabia are pushing for educational reforms to prepare competent teachers to deliver effective instruction in inclusive classrooms (Alquraini & Rao, 2018). In Saudi Arabia, students with learning difficulties are included in regular classes (Schwab et al., 2020). However, mainstream teachers do not receive additional support, assistance or resources associated with teaching students with learning difficulties in inclusive classrooms (Schwab et al., 2020). Further, there is a lack of continuous professional development linked to inclusive education, resulting in the prominence of a teacher-centred approach of teaching methods, negative attitudes towards inclusive education among the teachers, and a lack of effective partnerships with parents (Khochen-Bagshaw, 2020; Abed & Shackelford, 2021).

Due to the noticeable barriers in implementing inclusive education in Saudi Arabia, the teachers were found to hold mixed beliefs about their self-efficacy to teach in inclusive classrooms (Alnahdi, 2020). It is important for teachers to have the right mindset, knowledge, and skills necessary for addressing the diverse needs of students in inclusive classrooms (Karabay, 2016).

PURPOSE OF THE STUDY

This paper aimed to explore the teachers' role beliefs in the context of inclusive education and whether their role beliefs impact their beliefs about inclusive education. The following research questions were sought to be addressed in this paper:

1. What are the orientations of teachers' role beliefs among the Saudi Arabia mainstream teachers in this study?
2. What are their beliefs about inclusive education?
3. What are the relationships between their teachers' role beliefs and their beliefs about inclusive education?

METHODOLOGY

Research Design

In this research, an online survey was conducted to investigate the teachers' role beliefs and their beliefs about inclusive education. The online survey form was sent via various social media platforms to teachers in the first author's social network. The online survey was adopted in this study as paper-and-pen survey was not feasible during the pandemic time when this study was conducted. The design and implementation of this online survey abided to the guidelines of online survey design as outlined in Hlatshwako et al. (2021).

Sample and Sampling Method of the Study

The online survey was opened to elementary school teachers in Bisha City, Saudi Arabia, via a convenient sampling method. Forty-four mainstream teachers participated in this online survey where responses were obtained after three weeks. The majority of the teachers were male (70.5%), 31-40 years old (59.1%), with at least 10 years' teaching experience (75.0%), and 94.5% of them had at least a Bachelor's level of education (refer to Table 1). About 34.1%

of the teachers reported prior experience of teaching students with learning difficulties, even though only 15.9% of them had reportedly received prior training in special education. This finding revealed the existing scenario that a sizeable number of teachers (almost half of them), who were teaching students with learning difficulties in mainstream classrooms in Bisha City, Arab Saudi, did not have prior training in special education.

Table 1

Demographic Profiles

Demographic Information		n (%)
Gender	Female	13 (29.5)
	Male	31 (70.5)
Age	21-30 years old	2 (4.5)
	31-40 years old	26 (59.1)
	41-50 years old	14 (31.8)
	Over than 51 years	2 (4.5)
Role in School	Teacher	40 (9.9)
	Deputy principal	2 (4.5)
	Principal	2 (4.5)
Subject	Language	11 (25.0)
	Mathematics	9 (2.5)
	Sciences	6 (13.6)
	Geography	3 (6.8)
	History	9 (2.5)
	Arts and Crafts	2 (4.5)
	Music	3 (6.8)
	Physical Education	1 (2.3)
Level of education	Diploma	2 (4.5)
	Bachelor	29 (65.9)
	Bachelor plus Diploma	9 (2.5)
	Masters	3 (6.8)
	Doctorate	1 (2.3)
Years of experiences	1-5 years	3 (6.8)
	6-10 years	8 (18.2)
	More than 10 years	33 (75.0)
Age-group of students	3-6 years old	2 (4.5)
	7-10 years old	12 (27.3)
	11-14 years old	15 (34.1)
	15-18 years old	12 (27.3)
	19 years old and above	3 (6.8)
Have taught students with	No	29 (65.9)

learning difficulties	Yes	15 (34.1)
Have received training in special education	No	37 (84.1)
	Yes	7 (15.9)
Know how to teach students with learning difficulties	No	31 (7.5)
	Yes	13 (29.5)

Instruments of the Study

The first scale used in this study was the Teacher's Role Belief Scale (TRBS). This categorical scale was adapted from a qualitative study conducted by Domović et al. (2017), who asked 313 pre-service teachers in Croatia to complete a metaphorical sentence, "A teacher is like… because….". From their findings, four orientations of teachers' roles beliefs were identified (refer to Table 2). Eight metaphorical sentences were hand-picked by the first author from the qualitative dataset collected by Domović et al. (2017), based on the consideration of cultural familiarity and relevance. For this quantitative survey, these metaphoric sentences were presented in the format of a scale with a 4-point Likert Scale (Strongly Disagree, Disagree, Agree and Strongly Agree). The respondents were asked to rate their level of agreement for each metaphoric sentence in the scale. The Cronbach's Alpha recorded for this scale in this study was .72 (n=44), indicating an acceptable level of internal consistency (Hulin et al., 2001).

Table 2

Orientations of Teachers' Role Beliefs (Domović et al., 2017)

Orientations	Descriptions	Metaphorical sentences used in the current study (selected from Domović et al., 2017)
Behavioural	It is related to the traditional belief that the teacher is a knowledge transmitter.	B1. A teacher is like a book because he/she knows a lot. B2. A teacher is like an artist because his/her knowledge and creativity shapes and directs students.
Protective	It is related to the ethics of care.	P1. A teacher is like a parent because he/she cares about us, teaches us, nurtures, and prepares us for the future. P2. A teacher is like a friend because he/she directs and assists the student when he/she does something wrong and supports him/her when he/she does well.

Facilitating	It is related to seeing the teachers as a facilitator of students' learning and creator of a stimulating learning environment.	F1. A teacher is like a GPS device because he/she has to be precise and direct students to the right path and safely lead them to the goal. F2. A teacher is like a tree because he/she gives knowledge, puts in effort and encourages the development of students.
Self-referencing	It is related to insecurity and self-doubts about fulfilling teachers' roles.	S1. A teacher is like a robot because he/she does not have the possibility to create lessons as he/she wishes, because he/she has to follow the curriculum. S2. A teacher is like a politician because everyone knows what he/she should do better than he/she himself/herself does. At least, everyone thinks so.

The second scale used in the survey was the Inclusion-related Belief Scale (IBS), originally used by Metsala and Harkins (2020). The scale contains three dimensions of inclusion-related beliefs, namely Dimension 1: Beliefs about roles and responsibilities (2 items), originally from Kim (2011); Dimension 2: Beliefs about teaching and learning (7 items), originally from Glenn (2007, 2018); and Dimension 3: Negative beliefs about inclusion (3 items), originally from Glenn (2007). Two minor adaptations were made to suit the context of the current study. First, Metsala and Harkins (2020) used a 6-point Likert scale in their study, while in the current study, a 4-point Likert scale (Strongly Disagree, Disagree, Agree and Strongly Agree) was used. Second, the term 'students with disabilities' in the original scale was changed to 'students with learning difficulties' to better suit the focused group of students in this study, namely students with learning difficulties in inclusive classrooms. The Cronbach's Alphas recorded in this current study with 44 in-service teachers in Saudi Arabia were .89, .61, and .62.

Translation

Both scales (TRBS and IBS) were translated into the Arabic language by the first author who is English-Arabic bilingual, and the translation accuracy was checked by two English-Arabic bilingual teacher educators.

FINDINGS

Teachers' Role Beliefs

The findings from the eight items measured with the Teacher's Role Belief Scale showed a mean range of 2.23 to 3.43 (refer to Figure 1). The findings showed that as a group, the teachers related most to the protective role [*Mean* = 3.41, Standard Deviation (*SD*)=.583] and facilitating role (*Mean* = 3.37, *SD*=.584) as a teacher, as compared to a behavioural role (*Mean* = 2.99, *SD*=.605) and self-centred role (*Mean* = 2.32, *SD*=.691). T-test and ANOVA analyses

were conducted to investigate if any demographic variable had an effect on the teachers' role beliefs. The findings indicated that the teachers were homogeneous in their responses, and no statistically significant demographic effect was recorded.

Figure 1

Teachers' Role Beliefs

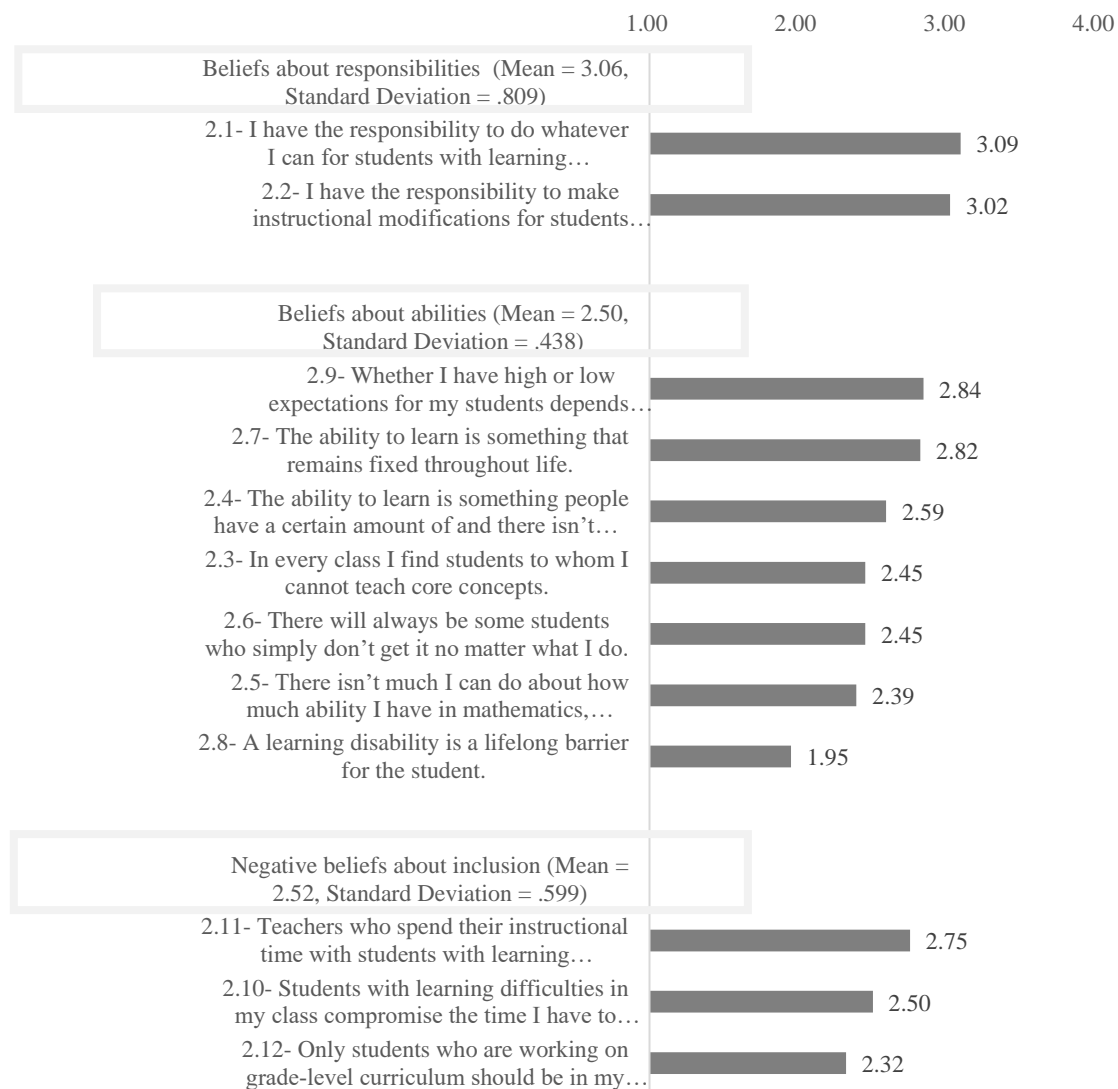|	1.00	2.00	3.00	4.00
Protective (Mean = 3.41, Standard Deviation = .583)				
P1. A teacher is like a parent.				3.41
P2. A teacher is like a friend.				3.41
Facilitating (Mean = 3.37, Standard Deviation = .584)				
F1. A teacher is like a GPS device.				3.30
F2. A teacher is like a tree.				3.43
Behavioural (Mean = 2.99, Standard Deviation = .605)				
B1. A teacher is like a book.				2.91
B2. A teacher is like an artist.				3.07
Self-referencing (Mean = 2.32, Standard Deviation = .691)				
S1. A teacher is like a robot.				2.23
S2. A teacher is like a politician.				2.43

Teachers' Beliefs About Inclusive Education

Figure 2 shows the mean scores for teachers' beliefs about inclusive education measured using the Inclusion-related Belief Scale (Metsala & Harkins, 2020). There are three belief dimensions in this scale. The items in the first dimension were positively phrased (a higher score indicates a more positive belief), while the items in the latter two dimensions were negatively phrased (a higher score indicates a less positive belief). The teachers reported strong positive beliefs about roles and responsibilities (Dimension 1) in inclusive education (*Mean* = 3.06, *SD*=.809). On the other hand, the mean scores of 2.50 (*SD*=.438) and 2.52 (*SD*=.599) were reported for the beliefs of teaching and learning (Dimension 2) and negative beliefs (Dimension 3), respectively. For beliefs about teaching and learning, the teachers seemed to see the ability to learn as rather fixed (*Mean* = 2.82); and, therefore, they would have a lower expectation on lower-performing students and vice versa (*Mean* = 2.84). In regards to negative beliefs, the concern that they would have less time for other students if they were teaching students with learning difficulties was the most prominent (*Mean* = 2.75). T-test and ANOVA analyses were conducted to investigate if any demographic variable had an effect on the teachers' beliefs in

inclusive education. Significant differences in negative beliefs were found as the effect of teachers' gender, $t(41) = -2.625$, $p < .05$. Male teachers were found to have a higher degree of negative beliefs (Mean = 2.67) as compared to female teachers (Mean = 2.18).

Figure 2

Teachers' Beliefs in Inclusive Education

Beliefs about responsibilities (Mean = 3.06, Standard Deviation = .809)	
2.1- I have the responsibility to do whatever I can for students with learning…	3.09
2.2- I have the responsibility to make instructional modifications for students…	3.02
Beliefs about abilities (Mean = 2.50, Standard Deviation = .438)	
2.9- Whether I have high or low expectations for my students depends…	2.84
2.7- The ability to learn is something that remains fixed throughout life.	2.82
2.4- The ability to learn is something people have a certain amount of and there isn't…	2.59
2.3- In every class I find students to whom I cannot teach core concepts.	2.45
2.6- There will always be some students who simply don't get it no matter what I do.	2.45
2.5- There isn't much I can do about how much ability I have in mathematics,…	2.39
2.8- A learning disability is a lifelong barrier for the student.	1.95
Negative beliefs about inclusion (Mean = 2.52, Standard Deviation = .599)	
2.11- Teachers who spend their instructional time with students with learning…	2.75
2.10- Students with learning difficulties in my class compromise the time I have to…	2.50
2.12- Only students who are working on grade-level curriculum should be in my…	2.32

Relationships of Teachers' Role Beliefs and Their Beliefs in Inclusive Education

Table 3 shows the Pearson 2-tailed correlation findings between teachers' role beliefs and their beliefs in inclusive education. The belief of self-centred teacher role was found to have positive correlations with beliefs about teaching and learning ($r = .415$, $p < .01$) and negative beliefs ($r = .481$, $p < .01$). In addition, the findings also revealed that negative beliefs are negatively correlated with beliefs about roles and responsibilities ($r = -.303$, $p < .05$) and positively correlated with beliefs about teaching and learning ($r = .529$, $p < .05$).

Table 3

Teachers' Beliefs in Inclusive Education

	Beliefs about Roles and Responsibility	Beliefs about teaching and learning	Negative Beliefs
Self-Referencing	-0.05	.415**	.481**
Facilitating	-0.132	-0.03	-0.064
Behavioural	0.15	-0.075	-0.119
Protective	-0.1	0.018	-0.017
Beliefs about Roles and Responsibility		.077	-.303*
Beliefs about teaching and learning			.529*

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Linear regression analyses were conducted to further explore the relationships. The belief of self-referencing teacher role was found to be a salient predictor of beliefs about teaching and learning, $F (1,42) = 8.006$, $p < .01$, which explained 16% of the observed variance in beliefs about teaching and learning (refer to Table 4).

Table 4

Summary of Linear Regression for Variable Predicting Beliefs About Teaching and Learning

Variable	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Self-referencing	.254	.090	.400			
R^2		.16				
F for change in R^2		8.006**				

The belief of self-referencing teacher role was also the most salient predictor of negative beliefs, $F (1,42) = 12.464$, $p < .01$, which explained 23% of the observed variance in negative beliefs. Teacher's gender was the second predictor of negative beliefs, $F (1,42) = 13.327$, $p < .01$, which explained an additional 16% of the observed variance in negative beliefs (refer to Table 5).

Table 5

Summary of Linear Regression for Variables Predicting Negative Beliefs About Inclusive Education

Variable	Model 1			Model 2		
	B	SE B	β	B	SE B	β
Self-referencing	.414	.117	.478	.437	.106	.504
Gender				.528	.158	.407
R^2		.23			.39	
F for change in R^2		12.464**			13.327**	

DISCUSSION

This study aimed to investigate the orientations of teachers' role beliefs and their beliefs about inclusive education in a sample of forty-four Saudi Arabia mainstream teachers regarding teaching students with learning difficulties in inclusive classrooms. First, the orientations of teachers' role beliefs were investigated. The findings showed that the teachers related most to the protective (i.e., a teacher is like a parent or a friend) and facilitating (i.e., a teacher is like a GPS or a tree) roles regarding teaching students with learning difficulties in inclusive classrooms. In comparison, they related less to the behavioural (i.e., the teacher is like a book or an artist) and self-referencing (i.e., the teacher is like a robot or a politician) roles regarding teaching students within inclusive classrooms.

The findings from the current study endorsed a few important findings previously reported by Domović et al. (2017) in their study, which involved 314 student teachers in a Croatian university. First, teaching-related knowledge and experience was found to impact teachers' role beliefs. In regards to this, the protective role orientation was found to increase from 1st year to 5th year students in Domović et al. (2017). The prominence of protective role orientation among experienced teachers was captured and endorsed in this current study, which involved a majority of teachers with over 10 years' teaching experience. Both statements related to protective role orientation (i.e., a teacher is like a parent, and a teacher is like a friend) were found to be the most highly rated among the Arabian teachers in this study, endorsing the notion that teaching-related knowledge and experience can strengthen the protective role orientation.

Domović et al. (2017) pointed to the relevance of self-confidence when they discussed the changes in teachers' role belief orientations. They realised the tendency for the student teachers in their study to report self-referencing orientation in situations in which they were less familiar to teach, such as teaching students with learning difficulties in mainstream classrooms. This hypothesis could not be verified in the current study, as the experienced teachers in the current study reported the lowest orientation towards statements related to self-referencing beliefs (i.e., a teacher is like a robot, a teacher is like a politician). However, in the current study, the teachers were not asked to separately report their orientations towards teaching typical students and students with learning difficulties. This contributes to a limitation in this study, in which it was not known whether teachers would report different orientations towards teaching different groups of students.

As a whole, the first set of findings revealed an orientation pattern of teachers' role beliefs among the experienced Arabian teachers in this study, in which protecting and facilitating role orientations are more prominent than behavioural and self-referencing role orientations. Based on the justifications previously put forward by Domović et al. (2017), it is possible to induce that the teacher's role belief orientation patterns as captured in this study are in line with their experience and confidence in teaching, in which protecting and facilitating role orientations are more highly upheld than behavioural and self-referencing role orientations, as the teachers are advancing in their teaching careers, as seen among the experienced teachers in this study. More importantly, the findings reflected the dominance of a constructivist view of teaching among the teachers. The dominance of a constructivist view is clear, considering that the experienced teachers in this study related more to the facilitating role beliefs than the behavioural role beliefs (i.e., a teacher is like a book, a teacher is like an artist), reflecting a higher emphasis on the role of stimulating learning rather than the role of delivering information and knowledge.

However, it is questionable whether the protective role orientation strengthens the constructivist view of teaching; or in contrast, impedes the true realisation of constructive teaching and learning. This needs further scrutinisation as to whether there are any characteristic differences in teachers with stronger facilitating role orientation over the protective role orientation than those with the opposite pattern, as recorded in this study. In a study with 227 pre-service teachers in China, Xin et al. (2020) found that facilitating orientation was more highly ranked than protective orientation by the pre-service teachers in their study. In their study, the pre-service teachers who were holding the facilitating orientation were identified as those who prioritise giving students with special educational needs encouragement, support and guidance, while those who were holding protective orientation prioritised the offering of 'warm embrace' and 'special care' to the students (Xin et al., 2020). Considering that facilitating orientation is closely linked to educational theories (Leavy et al., 2007) and teachers' beliefs about students' developmental conditions and needs, Xin et al. (2020) argued that teachers with facilitating role beliefs could better attune to students' learning needs and scaffold their learning.

On the other hand, given that protective orientation was more highly rated than facilitating orientation by the teachers in the current study, it raises the question regarding relationships and the dual effects of protective and facilitating orientations. In other words, whether protective orientation could act to mediate facilitating effects or impede facilitating effects. This is worth investigating since Vidović and Domović (2019) associated protective orientation with pre-professional, naive understanding of the teacher's role after they realised that this orientation tends to cease as the student teachers in their study gained more knowledge and experience in teaching. Therefore, future research is warranted to continue to examine the hierarchical role belief orientations in different groups of teachers and the implications of different hierarchical role belief orientations on their teaching practices. From the findings of this study, it is obvious that the hierarchical role belief orientations of the experienced teachers in this study are different from the orientations reported by student teachers in Domović et al. (2017), pointing to the values of continued research in role belief orientations in different teacher groups across cultures and school types to identify how and why their innate core beliefs are manifested differently.

Second, teachers' beliefs about inclusive education were investigated from three dimensions, namely their beliefs of teaching roles and responsibilities, their beliefs of teaching and learning and negative beliefs about inclusive education. In line with the position put forward by Glenn (2007; 2008) and Metsala and Harkins (2020), the findings portrayed a multi-

dimensional representation of teachers' beliefs about inclusive education. In general, the teachers reported strong positive beliefs about their roles and responsibilities in inclusive education. This finding is in line with the 'responsibilisation' of teachers, where legislation and statutory guidance have discursively constructed the teacher as a professional who takes responsibility for student and school performance, pastoral care, inclusion and social change (Done & Murphy, 2018). Done and Murphy (2018) adopted the concept of 'responsibilisation' from Foucault (1978) to denote the complex processes that teachers came to identity with the objectives of inclusion and posited that the 'responsibilisation' of teachers oblige the teachers to conform to inclusion policy. However, within the concept of 'responsibilisation,' there are fundamental differences between 'professional responsibilities' and 'professional accountability' (Done & Murphy, 2018; Solbrekke & Englund, 2011).

The other findings from the study offered the insight that the shift from 'professional responsibilities' to 'professional accountability' can be impeded by negative beliefs about inclusive education. In this study, male teachers were found to have a greater degree of negative beliefs as compared to female teachers. In regards to this, the subsequent finding also revealed that teachers' negative beliefs are closely associated with their beliefs about teaching and learning (Glenn, 2018; Silverman, 2007). The finding supported the notion that teachers who believe that the ability is fixed tend to have a greater degree of negative beliefs about inclusive education compared to those who believe that ability is fluid and malleable (Glenn, 2018; Metsala & Harkin, 2020). Together, the findings supported Glenn's (2018) view that teachers' beliefs about their roles and responsibilities in inclusive education are related to their more widely held beliefs about teaching and learning and negative beliefs about inclusive education, as added by Metsala and Harkin (2020).

Third, extending from the prior works by Glenn (2018) and Metsala and Harkin (2020), this study explored the extent to which teachers' role beliefs impact their beliefs about inclusive education. Teachers' role beliefs were investigated using a metaphoric approach by Domović et al. (2017), as described earlier. Amongst the four teacher role orientations investigated, belief in self-referencing role was identified as the salient predictor of rigid beliefs about teaching and learning (explained 16% of the observed variance) and negative beliefs of inclusive education (explained 23% of the observed variance). For negative beliefs of inclusive education, teachers' gender effects were found to add an additional 16% of the observed variance. Together, the findings added a novel insight that the metaphoric descriptions of teachers' roles could be used to disclose the relationships between teachers' role orientations and their beliefs about inclusive education. The fact that both rigid beliefs of teaching and learning and negative beliefs of inclusive education could be predicted by self-referencing teaching role belief orientation point to a non-constructivist view on teaching and learning as the major hindrance of inclusive education. As such, Kugelmass (2007) differentiated cognitive and social constructivism in teaching. According to her, teachers whose practice reflects cognitive constructivism tend to support the development of 'internal schema' in individual students, while those whose practice reflects social constructivism would tend to focus more on meaningful interactions within the context of teaching and learning. These practices were reflected in behavioural, facilitating, and protective role orientations, which do not have any relationship with negative beliefs about inclusive education. In contrast, the non-constructivist view, namely the self-referencing role belief, has emerged as the salient predictor of rigid beliefs about teaching and learning and the negative beliefs about inclusive education.

CONCLUSION

The findings from this study contributed evidence to prove the notion that the salience of a non-constructive view of teaching and learning is a major hindrance for teachers to develop positive beliefs about inclusive education. Given the findings, it offers a direction to better prepare the teachers in their journey of inclusive education by focusing on the philosophy and principles of constructivism in teacher training and professional development, which are in line with the ethos of inclusive education.

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