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Teachers' educational beliefs and curriculum orientations: A relational research

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TEACHERS' EDUCATIONAL BELIEFS AND CURRICULUM ORIENTATIONS: A RELATIONAL RESEARCH

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Abstract

The purpose of this study was to examine the relationship between teachers' educational beliefs and curriculum design orientation preferences. In this research, prediction research design, one of the correlation models, was employed. The study group consisted of teachers (n = 182) working in public primary, elementary and high schools in Bilecik province, Turkey. The findings revealed there were significant relationships between the teachers' educational beliefs and curriculum orientations. According to the regression analysis undertaken, the model was statistically significant as a whole and the teachers' educational beliefs and curriculum orientations were significantly correlated. The teachers' educational beliefs predicted 39% of the curriculum orientations. According to these results, it is suggested that the educational beliefs of teachers have a key role in shaping their curriculum orientations.

Keywords: Educational beliefs; curriculum orientations; teachers; relational research

Introduction

In recent years there has been increasing emphasis on educational beliefs of teachers (Kim, Kim, Lee, Spector, & DeMeester, 2013). This research has suggested that educational beliefs have a significant influence on curriculum, teaching, and learning (Thompson, 1992). While educational beliefs play an important role in schooling (Chan & Elliott, 2002), they appear to influence teachers' curriculum orientations (Jenkins, 2009), thus their decisions about teaching practices (Pajares, 1992). Educational beliefs, by influencing curriculum orientations, provide guidance to teachers in determining activities in the teaching-learning process (Thompson, 1992). Curriculum orientations, stemming from educational beliefs, influence the way teachers practise teaching in the classroom (Ng & Cheung, 2002). In other words, teachers organise the teaching-learning process in light of a specific curriculum orientation, acting on the basis of educational beliefs (Jenkins, 2009). Although the relationship between educational beliefs and factors associated with schooling has been well documented, there is a need to provide evidence to support this assumption. Therefore, the purpose of this research was to examine this relationship as it is believed to contribute to the understanding of how educational beliefs are playing a role in shaping curriculum orientations of teachers.

Theoretical framework

Educational beliefs

Educational beliefs constitute teachers' conceptions, proposals and hypotheses about issues related to education (Hermans, van Braak, & van Keer, 2008). Educational beliefs are very important in terms of teachers' decisions about learning, instruction, and curriculum (Woolley, Benjamin, & Woolley, 2004), affecting their teaching practices (Pajares, 1992). These beliefs lie at the heart of teaching (Tondeur, Hermans, van Braak, & Valcke, 2008); thus, they reflect on how teachers deliver instruction in the classroom (Levin & Wadmany, 2005).

Educational beliefs of teachers are formed based on their education philosophies (Tanrıverdi & Apak, 2014). Philosophies of education, in brief, deal broadly with the problems and issues related to education itself (Noddings, 2012). They provide teachers with a framework for organising schools and classrooms (Ornstein & Hunkins, 2012). Education philosophies shed light on schooling and try to give a comprehensive explanation of the purpose of schooling and education (Gutek, 1988). Although there are many educational philosophies, this study extracts five distinct ones (Wiles & Bondi, 2007), as perennialism, essentialism, progressivism, reconstructionism, and existentialism (Gutek, 1988).

As the oldest and most conservative one, perennialism relies on the past and stresses traditional values (Ornstein & Hunkins, 2012). For the perennialist, education is a preparation for life, and students should be taught the permanence of the world through structured study (Wiles & Bondi, 2007). The perennialist's curriculum is subject-centred, relying heavily on defined disciplines or logically organised bodies of content (Ornstein & Hunkins, 2012). The main purpose of essentialism is to transfer the cultural inheritance to the individuals of the society (Gutek, 1988). In essentialism, while mastering the skills, facts, and concepts that form the basis of the subject matter are taken into account (Ozman & Craver, 2008), discipline, training, homework and hard work are emphasised (Ornstein & Hunkins, 2012). Regarding progressivism, the world is an ever-changing place, where reality is what is actually experienced (Wiles & Bondi, 2007). Since the reality is constantly changing (Noddings, 2012), the skills including problem-solving and scientific thinking should be taught to students (Gutek, 1988), emphasising *how* to think, instead of *what* to think (Ornstein & Hunkins, 2012). Progressivism also emphasises that students should be freed from teacher authority, and teaching should be based on student needs and interests (Noddings, 2012). In contrast, the reconstructionist argue that progressivism overemphasises the needs of the child, neglecting social problems (Dunn, 2005). They advocate greater emphasis on society-centred education that addresses the needs of the society (Pring, 2004). The reconstructionist see school as a critical place, where modern social problems are identified and solved (Gutek, 1988). The existentialist advocate that students be free to choose how and what they study (Ornstein & Hunkins, 2012). Through an existentialist education, students are taught the merit of human freedom as being superior to any other thing in the world (Pring, 2004). Also, for existentialists, schools are places that assist students in knowing themselves and learning their place in society (Wiles & Bondi, 2007). Thus, students should make choices in determining things in their own lives (Dunn, 2005).

Curriculum orientations

Affected by educational beliefs (Ornstein & Hunkins, 2012), curriculum orientations can be defined as teachers' beliefs about the educational goals and the components of the curriculum (Cheung & Ng, 2000). Similarly, curriculum orientations are beliefs about what the curriculum should achieve and how teaching, learning and assessment should occur (Tanrıverdi & Apak, 2014). These orientations designate teachers' ways of thinking about the curriculum (Jenkins, 2009), which in turn, influence their teaching practices in the classroom (Baş, 2013). Although there are various curriculum orientation classifications in the literature (Cheung & Wong, 2002), this study adopted a more comprehensive orientation classification, defined as subject-centred curriculum orientation, learner-centred curriculum orientation, and problem-based curriculum orientation (Ornstein & Hunkins, 2012).

As the oldest and most common curriculum orientation, subject-centred orientation reflects the traditional understanding that focuses on the teaching of content (Henson, 2006 through well-organised courses (Hewitt, 2006). In this orientation, learning of the content organised in disciplines as courses, constitutes the basis of the curriculum (Oliver & Gordon, 2013). This orientation is based upon the views of perennialism and essentialism, which are the reflections of idealist and realist philosophies (Ornstein & Hunkins, 2012). Based on the progressivism (Gutek, 1988), learner-centred orientation advocates that student is at the heart of the curriculum, and individual differences of the student should be taken into account (Oliver & Gordon, 2013). This orientation gives particular importance to student needs and interests (Egan, 2008); thus, it stresses the whole child (Ellis, 2013). Learner-centred orientation requires the student to be an active member of the teaching-learning

process (Hewitt, 2006), and the curriculum is shaped in light of the needs and interests of the student (Ornstein & Hunkins, 2012). As an extension of the progressivism (Ellis, 2013), problem-centred orientation focuses on real-life problems of individuals and society (Ornstein & Hunkins, 2012), placing the social problems in the heart of the curriculum (Marsh & Willis, 2007). Based on social issues, problem-centred orientation intends to reinforce cultural traditions and address the unmet needs of the society (Ellis, 2013). In this orientation, the purpose of education is to make the student have an understanding of social issues, and solve the problems faced in the society (Ornstein & Hunkins, 2012).

Current research

An examination of previous research revealed that educational beliefs and curriculum orientations are closely related (Alsalem, 2018; Cheung & Wong, 2002), however, there is less current evidence for this relationship. Therefore more research is required which may contribute to a better understanding of the role that educational beliefs play in shaping curriculum orientations. This research used two different tools to examine this relationship (Baş, 2013; Yılmaz, Altınkurt, & Çokluk, 2011), instead of using the existing tools adopted in previous research (Alsalem, 2018; Cheung & Wong, 2002). Further, previous research has focused on eastern cultures, excluding the western context. By taking the gap in the literature into account, this research focused on a culture which has eastern and western traditions. From this perspective, the research question of this study was posed as "Is there a significant relationship between educational beliefs and curriculum orientations of teachers?" In line with this research question, the following sub-questions were addressed:

1. What is the relationship between educational beliefs and curriculum orientations?

2. What is the prediction level of educational beliefs for curriculum orientations?

Methodology

Research design

In this study, the prediction research design–one of the correlation research models–was employed (Johnson & Christensen, 2010). The purpose of a prediction research design is to identify variables that will predict an outcome or criterion (Creswell, 2012). In such research, the variable that is used to make the prediction is called the predictor variable; the variable about which the prediction is made is called the criterion variable (Fraenkel & Wallen, 2006). In this research, educational beliefs were adopted as the predictor variable, and curriculum orientations were chosen as the criterion variable.

Study group

The study group consisted of teachers (n = 182) working in public primary, secondary, and high schools in Bilecik province, Turkey. Of these teachers, 50% (n = 91) were female and 50% (n = 91) were male. It was found out that of the teachers participating in the study, 19.8% (n = 36) had 1-5 years, 26.6% (n = 43) had 6-10 years; 12.1% (n = 22) had 11-15 years, 39% (n = 71) had 16-20 years; and 5.5% (n = 10) had 21 years and above occupational experience. Besides, when the school types of the teachers were examined, it was seen that 40.1% (n = 73) of them were primary school teachers, 9.9% (n = 18) of them were secondary school teachers, and 50% (n = 91) of them were high school teachers. In addition, it was observed that 8.8% (n = 16) of them had senior high school education, 81.3% (n = 148) of them had undergraduate education and 9.9% (n = 18) of them had postgraduate level education.

Data collection

Prior to the data collection, necessary permission was taken from the National Directorate of Education of the province. After obtaining permission, one of the researchers visited the schools of

the study group. In this research, volunteer participation of the teachers was sought while applying the data collection tools, taking the ethical issues into consideration (Jones, 2000). During the application of the tools, the teachers were informed about the purpose of the research, and necessary explanation was made regarding the completion of the scales. Also, the teachers were assured that their responses would not be used out of purpose, and their confidentially would be sustained.

Data collection tools

Educational beliefs scale

In this research, the "Educational Beliefs Scale" developed by Yılmaz, Altınkurt, and Çokluk (2011) was used in order to examine the teachers' educational beliefs. The scale consisted of a total of 40 items, grouped under five dimensions as; *(a)* perennial educational belief (e.g., Education is the process of adapting to universal and unchanging reality; α = 0.70), *(b)* essential educational belief (e.g., Education should be more teacher-centered than student; α = 0.70), *(c)* progressive educational belief (e.g., Education should be student-centered; α = 0.91), *(d)* reconstructive educational belief (e.g., The school should reinterpret basic values; α = 0.81), and *(e)* existentialist educational belief (e.g., Education should allow each person to know their own characteristics; α = 0.89). In addition, the results of the confirmatory factor analysis applied to the scale (χ^2/df = 1621.67/728; GFI = .0.85; CFI = .97; RMSEA = .046; NFI = .95) showed that the scale had acceptable values (Yılmaz, Altınkurt, & Çokluk, 2011).

Curriculum Orientations Scale

The "Curriculum Orientations Scale" developed by Baş (2013) was also used in order to examine the teachers' educational beliefs. The scale consisted of a total of 30 items, grouped under three dimensions as; *(a)* subject-centred curriculum orientation (e.g., Curriculum must be organised according to unchanging universal knowledge; α = 0.89), *(b)* learner-centred curriculum orientation (e.g., Student's needs, interests, and expectations must be taken into consideration at course; α = 0.89), *(c)* problem-centred curriculum orientation (e.g., Courses must address community needs and problems; α = 0.87). In addition, the results of the confirmatory factor analysis applied to the scale (χ^2/df = 604.02/402; GFI = .83; CFI = .0.90; RMSEA = .05; NFI = .77) showed that the scale had acceptable values (Baş, 2013).

Data analysis

In this research, the relationship between teachers' educational beliefs and curriculum orientations was examined through the Pearson Product Moment Correlation technique (Cohen, West, & Aiken, 2014). Multiple regression analysis was carried out in order to examine the prediction level of teachers' educational beliefs for their curriculum orientations (Gelman & Hill, 2006). Prior to the multiple regression analysis, Mahalanobis distance values, and skewness and kurtosis values were checked (Howell, 2006). Also, the relationship was examined as to whether there was autocorrelation among the variables included in the regression analysis (Tabachnick & Fidell, 2007), and it was decided that there was no autocorrelation considering the Durbin-Watson value (D-W = 1.61). In addition, the data set was examined in terms of assumptions of multiple linear regression (variance inflation factor [VIF] = 0.00-1.99; condition index [CI] = 1.00-21.16), suggesting that there was no multicollinearity between the independent variables (Shavelson, 2012). After all these examinations, the data set was seen to be suitable for multiple regression analysis.

Results

Correlation analysis

The Pearson Moment Product correlation analysis was conducted in the process of revealing the relationship between teachers' educational beliefs and curriculum design orientations preferences (Table 1).

Table 1:   Correlation Matrix Between Research Variables

Variables	1	2	3	4	5	6	7	8
Teachers' Educational Beliefs								
a. Perennialist Educational Belief	–	.264**	.135	.129	.262**	.361**	.026	.198**
b. Essentialist Educational Belief		–	−.206**	-.027	−.221**	.561	−.349**	-.092
c. Progressivist Educational Belief			–	.390**	.591**	-.095	.574**	.422**
d. Reconstructive Educational Belief				–	.262**	.199**	.233**	.281**
e. Existentialist Educational Belief					–	-.041	.431**	.549**
Teachers' Curriculum Design Orientations								
a. Subject-Centred Curriculum Orientation						–	-.103	.195**
b. Learner-Centred Curriculum Orientation							–	.563**
c. Problem-Centred Curriculum Orientation								–

Note. **$p < .001$

According to the findings obtained in the research, while it was observed that there were positive significant relationships between teachers' perennialist ($r = .361$, $p < .01$), essentialist ($r = .561$, $p < .01$), reconstructive beliefs ($r = .199$, $p < .01$) and subject-centred curriculum orientations, it was determined that there was no significant relationship between progressivist ($r = -.095$, $p > .01$) and existentialist ($r = -.041$, $p > .01$) beliefs and subject-centred curriculum orientations.

Also, while it was observed that there was no significant relationship between perennialist belief ($r = .026$, $p > .01$) and student-centred curriculum orientation, it was determined that there was a significant negative relationship between essentialist belief ($r = -.349$, $p < .01$) and student-centred curriculum orientation. There was also a positive significant relationships between progressivist ($r = .574$, $p < .01$), reconstructive ($r = .233$, $p < .01$), and existentialist ($r = .431$, $p < .01$) beliefs and student-centred orientation.

Lastly, while it was observed that there were significant positive relationships between perennialist ($r = .198$, $p < .01$), progressivist ($r = .422$, $p < .01$), reconstructive ($r = .281$, $p < .01$) and existentialist ($r = .549$, $p < .01$) beliefs and problem-centred curriculum orientation, it was found that there was no significant relationship between essentialist belief ($r = -.092$, $p > .01$) and problem-centred orientation.

Regression analysis

A multiple linear regression analysis of the teachers' education beliefs and curriculum orientations was employed in the research (Table 2).

Table 2:   Prediction Level of Teachers' Educational Beliefs for Curriculum Orientations

Predictor Variable [a]	B	Std. Error	β	t
(constant)	5.785	4.600		1.257
a. Perennialist educational belief	2.603	.786	.212	3.311*
b. Essentialist educational belief	4.598	.596	.491	7.720**
c. Progressivist educational belief	-1.669	1.001	-.127	-1.667
d. Reconstructive educational belief	2.072	.578	.227	3.583**
e. Existentialist educational belief	.345	.949	.027	.363

Note. Dependent Variable [a] = Subject-Centred Orientation, $R = .639$, $R^2 = .408$, $F_{[5\text{-}176]} = 24.266$
* $p < 0.05$, ** $p < 0.01$

Predictor Variable [b]	B	Std. Error	β	t
(constant)	1.894	.402		4.708**
a. Perennialist educational belief	-.006	.069	-.006	-.087
b. Essentialist educational belief	-.185	.052	-.229	-3.550**
c. Progressivist educational belief	.518	.088	.456	5.921**
d. Reconstructive educational belief	.017	.051	.022	.342
e. Existentialist educational belief	.116	.083	.107	1.396

Note. Dependent Variable [b] = Student-Centred Orientation, $R = .626$, $R^2 = .392$, $F_{[5\text{-}176]} = 22.718$
** $p < 0.01$

Predictor Variable [c]	B	Std. Error	β	t
(constant)	1.704	.326		5.223**
a. Perennialist educational belief	.038	.056	.046	.682
b. Essentialist educational belief	.012	.042	.020	.293
c. Progressivist educational belief	.098	.071	.112	1.387
d. Reconstructive educational belief	.070	.041	.115	1.710
e. Existentialist educational belief	.373	.067	.445	5.537**

Note. Dependent Variable [c] = Problem-Centred Orientation; $R = .575$, $R^2 = .331$, $F_{[5\text{-}176]} = 17.431$
** $p < 0.01$

While it was seen that education beliefs were significant predictors of subject-centred curriculum orientation ($F_{[5\text{-}176]} = 24.269$, $p < .05$), these beliefs were determined to explain approximately 41% ($R = .639$, $R^2 = .408$) of subject-centred orientation. Also, while it was seen that education beliefs were significant predictors of student-centred curriculum orientation ($F_{[5\text{-}176]} = 22.709$, $p < .05$), they were concluded to explain 39% ($R = .626$, $R^2 = .392$) of student-centred orientation. Lastly, while it was seen that education beliefs were significant predictors of problem-centred curriculum orientation ($F_{[5\text{-}176]} = 17.410$, $p < .05$), they were determined to explain 33% ($R = .575$, $R^2 = .331$) of problem-centred orientation.

Discussion

This research examined the relationship between educational beliefs and the curriculum orientations of teachers. During the research, it was found that there were significant relationships between teachers' educational beliefs and curriculum orientations. Similarly, previous research had also indicated that there was a significant relationship between these two variables (Alsalem, 2018).

Alsalem (2018) also reported a positive relationship between educational beliefs and curriculum orientations, whereas this research demonstrated both positive and negative findings.

The research also revealed that there was a positive relationship between traditional educational beliefs (perennialism and essentialism) and subject-centred curriculum orientation. The research reported a minimal relationship between reconstructive education belief and student-centred orientation, however, to the contrary, it also suggested that there was a negative relationship between contemporary educational beliefs (progressivist and existentialist) and student-centred curriculum orientation. While it was seen that education beliefs were significant predictors of subject-centred curriculum orientation, essentialist and perennialist beliefs were observed to rank high in the prediction of subject-centred orientation. Thus, it can be suggested that teachers adopting student-centred curriculum orientation have a traditional educational belief. In other words, educational beliefs of teachers have a significant influence on their curriculum orientations, making them adopt traditional ways of teaching (Cheung & Wong, 2002). Since teachers adopting perennialist and essentialist beliefs are inclined to demonstrate subject-centred orientation (Ornstein & Hunkins, 2012), they practise a traditional way of teaching in the classroom (Pajares, 1992). They demonstrate teacher-centred practices (Schuh, 2004), concerning the transformation of the content knowledge to students (Woolley, Benjamin, & Woolley, 2004).

While the research indicated that there was no significant relationship between perennialist belief and student-centred curriculum orientation, it exhibited that there was a significant negative relationship between essentialist belief and student-centred curriculum orientation. It was concluded that there was a significant positive relationship between progressivist, reconstructive, and existentialist beliefs and student-centred curriculum orientation. Further, while it was seen that education beliefs were significant predictors of student-centred curriculum orientation, progressivist, existentialist, and reconstructive beliefs were concluded to rank high in the prediction of learner-centred orientation. Based on these results, it is suggested that teachers adopting contemporary education beliefs are inclined to demonstrate a student-centred teaching practice (Prawat, 1992), rather than a subject-centred practice. While contemporary educational beliefs are associated with learner-centred orientation (Ornstein & Hunkins, 2012), teachers having such beliefs tend to implement student-centred applications in the classroom (Schuh, 2004). These teachers place student-centred applications in the heart of classroom teaching (Kauchak & Eggen, 2007), and they tend to create a constructivist learning environment (Brooks & Brooks, 1999).

Lastly, the research revealed that there was a significant positive relationship between perennialist, progressivist, reconstructive, and existentialist beliefs and problem-centred curriculum orientation. It was found that there was no significant relationship between essentialist belief and problem-centred orientation. The research reported a minimal relationship between perennialist belief and problem-centred orientation, however, other educational beliefs demonstrated a moderate to high level of relationship with problem-centred orientation. Also, it was observed that education beliefs were significant predictors of problem-centred curriculum orientation, while existentialist, progressivist, and reconstructive beliefs were concluded to rank high in the prediction of problem-centred orientation. Based on these results, it was suggested that teachers adopting contemporary education beliefs tend to demonstrate a problem-centred practice. Despite the main concern that problem-centred orientation is largely focused on the nature of problems (Ornstein & Hunkins, 2012), it addresses students' needs, concerns, and abilities (Baş, 2013), supporting the assumptions of contemporary educational beliefs (Ellis, 2013). While teachers adopting contemporary educational beliefs take student needs and interests into account (Pring, 2004), they are inclined to engage students in critical analysis of the local, national and international community (Ornstein & Hunkins, 2012).

In conclusion, this research demonstrated the relationship between educational beliefs and the curriculum orientations of teachers. Teachers having traditional educational beliefs were seen to exhibit a subject-centred orientation, whereas teachers adopting contemporary beliefs were found to demonstrate learner-centred and problem-centred orientations. Based on these results, it can be suggested that the educational beliefs of teachers have a considerable role in curriculum orientations,

reflecting on their teaching practices. Although prior educational beliefs of teachers are hard to change (Lin, Janet, & Jeffrey, 1999), they can be shifted through curriculum training (Lichty & Johnson, 2006), making teachers adopt learner-centred and problem-centred orientations (Ornstein & Hunkins, 2012). When teachers change the way they think about education, their curriculum orientations also change (Lichty & Johnson, 2006), reflecting on their teaching practice in the classroom.

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