Investigating the impacts of core educational quality on the satisfaction and loyalty of parents of secondary school students: The mediating role of transformative quality

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Abstract: As competition in the secondary education market grows, increasing service quality to ensure parents’ satisfaction and loyalty is crucial to the future success of secondary schools. As parents of secondary school students (PASESS) are not the direct recipients of educational service, the main goal of this research was to investigate the mediating role of transformative quality between assessment of core educational quality and parents’ satisfaction and loyalty. Structural equation modeling was used to analyze the data collected from 209 PASESS in Vietnam. The results showed that, similar to previous research, satisfaction is the strongest determinant of loyalty. Attitude and behavior were the only components of core educational quality that had a direct impact on loyalty. The findings also revealed that the relationship between competence and curriculum and core educational quality and loyalty is mediated by transformative quality and satisfaction. The

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PUBLIC INTEREST STATEMENT

In recent years, the competition in Vietnam's secondary education sector has become more intense. Educational institutions are trying to increase service quality to win parents' satisfaction and loyalty as these factors are crucial for the institutions’ future success. Therefore, this research aims to examine the role of an important component of service quality, called transformative quality, in parents’ satisfaction and loyalty. The results, derived from data from 209 parents of children in secondary education in Vietnam, showed that (1) satisfaction is closely connected with loyalty; and (2) transformative quality has both direct and indirect impacts on loyalty. Therefore, we suggest that public and private secondary schools should allocate funding to improving the transformative quality of educational services to increase parents’ loyalty.
practical implications and theoretical contributions of the research findings are also discussed.

**Subjects:** Educational Research; Education Studies; Secondary Education

**Keywords:** parent; satisfaction; loyalty; core educational quality; transformative quality; secondary education

1. Introduction
Over the past decade, an increasing literature has developed focused on investigating the issues of education using a marketing lens (Nedbalová et al., 2014; Santini et al., 2017; Uncles, 2018). This stems from the fact that schools across the world receive less support from governments (e.g., see Leachman et al., 2017) and have more competitors than before (Lundström & Holm, 2011). This trend is more prevalent with secondary education, where institutions' revenue sources are increasingly dependent on their “customers” (i.e., students and parents). With a growing population (over 90 million people) and a steady increase in average income, competition in the education market in Vietnam is predicted to become fiercer in the near future. The public sector is also becoming involved in this competition. Although public secondary education in Vietnam still has guaranteed funding from the government, the unavoidable trend toward fiscal autonomy (Nguyen, 2019) has emphasized the importance of preparations for a more free and competitive education quasi-market (Bradley & Taylor, 2002). In this situation, the incentive to increase market attractiveness via effective marketing strategies is no longer solely the priority of private educational institutes, but is also a focus for the public education sector.

Among different concepts in the marketing literature, satisfaction and loyalty are two of the most established factors related to effective customer engagement and retention (Hallowell, 1996; Rust & Zahorik, 1993). With regard to satisfaction, prior studies have identified various benefits of highly satisfied customers, such as increased profit and market share (Rust & Zahorik, 1993). Loyalty is closely linked to customer retention and affinity (Shoemaker & Lewis, 1999). However, the examination of satisfaction and loyalty within the educational service requires a different perspective from the traditional market approach since the affiliation between parent and school differs from the traditional customer-service provider relationship. As previous research has pointed out, heightened parental satisfaction benefits not only the school's funding, but also the parents’ school involvement, and the children’s academic results (Fantuzzo et al., 2006). As the customers of educational services are often committed to a long-term relationship with a specific educational institution, loyalty is also an important factor to examine when considering educational service from a marketing perspective. Parents’ loyalty is known not only for increasing the school's image and ability to retain students (Li & Hung, 2009) but also for its close connection with satisfaction. As expressed by Lai et al. (2019), in the educational context, the measurement of customer satisfaction is not adequate without taking into account customer loyalty.

Currently, research on the marketing aspects of educational service is focused mostly on the marketing mix (e.g., see Ivy, 2008; Mahajan, 2017; Ndofirepi et al., 2020) and higher education (e.g., Clark et al., 2017; Pham & Lai, 2016). There is little work exploring the determinants and mechanisms that lead to parents' satisfaction and loyalty in secondary education, despite the importance of the concepts. From the traditional marketing perspective, the main assumed predictor of satisfaction and loyalty has been service quality (Shemwell et al., 1998; Wallin Andreassen & Lindestad, 1998; Wu, 2014). Therefore, the importance of service quality in raising parents’ satisfaction and loyalty should also be emphasized in the educational context. Within the literature on educational service quality, the concept of core educational quality (i.e., teacher attitudes and behavior, competence, curriculum, and pedagogy) aligns with the most with students' perceptions of service quality (see Teeroovengadum et al., 2016), which leads to satisfaction and loyalty. However, in the limited literature on education from a marketing perspective, the relationship between core educational quality and parent satisfaction and loyalty is still under-examined.
One reason might be that the subjects of research on core educational quality were mostly college students rather than parents of secondary school students (PASESS). Although PASESS are not the direct consumers of secondary education, their choice of educational service provider is critical to the provider's success. Therefore, in order to increase the market attractiveness of an educational institute, it is critical to examine the determinants and mechanisms leading to parents' satisfaction and loyalty.

This research also examines the role of transformative quality on parental satisfaction and loyalty. According to Teeroovengadum et al. (2016), unlike other types of service, education is distinctive because the main indicator of quality education is represented not only by normal service characteristics but also by transformative quality. As pointed out by Harvey and Green (1993), education not only provides services but also puts the customer (i.e., the student) through a process of qualitative transformation. Despite being an important predictor of educational satisfaction and loyalty, research on transformative quality has mostly focused on the student rather than the parent. Given the above circumstances, the purposes of this research were two-fold: first, this study aimed to verify the impact of core educational quality (i.e., Attitudes and behavior, Curriculum, Pedagogy, and Competence) on secondary education parental satisfaction and loyalty. Second, this study examined the mediating role of transformative quality on the connection between core educational quality, satisfaction and loyalty.

In order to achieve the research purposes, this paper provides a short synopsis of relevant concepts and theoretical components as well as a proposed hypothetical model. Confirmative analyses were also conducted to investigate the research hypotheses. The paper conclusion provides a discussion of the results and the theoretical contributions of the study, as well as its practical implications.

2. Literature and hypotheses development

2.1. Parent's loyalty
Generally, loyalty is an indicator of the commitment between customers and service providers (Coelho & Henseler, 2012). In the educational context, according to Li and Hung (2009), parent loyalty is conveyed by parents' commitment to a preferred school in a long-term relationship. Parental loyalty to an institution, like other kinds of loyalty, can be expressed via either behavioral (e.g., word-of-mouth, advocacy action), or attitudinal expressions (e.g., willingness, emotional affiliation), or a composite approach. As it has been established in the literature that behavioral intention can predict actual behavior (Ajzen, 1991; Yadav & Pathak, 2017), this paper examines the concept of loyalty from a composite perspective, measured by both action intention and willingness.

2.2. Parent's satisfaction
In the marketing literature, satisfaction with services is recognized as the most influential predictor of customer loyalty (Oliver, 1980). As students are the direct receivers of the educational service, their satisfaction is often measured by pre-post expectations and assessments of their experience with a school (Santini et al., 2017). However, measuring parents' satisfaction requires another approach. According to Fantuzzo et al. (2006), parental satisfaction can be expressed via communication with their children's educational institutions. Based on the well-established literature on customer loyalty and satisfaction (Hallowell, 1996; Kandampully & Suhartanto, 2000), this research hypothesized that parental satisfaction with the educational experience of their children is the main indicator of the degree of loyalty.

2.3. Core educational quality
The literature indicates that service quality can be measured by either performance or an expectation-only approach. In the expectation approach, service quality is measured based on the extent to which the expectations of the customer are satisfied by service providers. However, this
approach is problematic since the expectations of parents and students with regard to educational service are sometimes unaligned and differ considerably, which greatly reduces the external validity of research results. Furthermore, the act of capturing expectations is based on the assumption that parents and children have clear expectations about an educational service, yet sometimes this is not the case (Ford et al., 1999; Joseph & Joseph, 1997). In contrast, the outcomes approach to service quality is easier to generalize and operationalize for both parents and their children. As previously mentioned, core educational quality is a major indicator of students’ perception of service quality. Core educational quality consists of four dimensions, which can be proxied through some of the questions in the Higher Education Service Quality (HESQUAL) measurements (Teeroovengadum et al., 2016). We adapted our questionnaire based on the HESQUAL measurements mainly because the measurement also includes a scale dealing with transformative quality as a dimension of service quality, which aligns with our theoretical proposition. With regard to the dimensions of core educational quality, the “attitude and behavior” factor can be defined through the questions “Teachers understanding students’ needs and availability of teachers to guide and advise students”. Second, “curriculum” indicates a “clearly defined course content and course objectives” and the “usefulness of module content and design to cater for the personal needs of students.” Third, “pedagogy” can be expressed through the “use of multimedia in teaching” and “teachers encourage active participation of students in their learning process.” Last, “competence” is defined by the “theoretical knowledge, qualifications and practical knowledge of teachers” and the “communication skills of teachers” (see the Appendix).

2.4. Transformative quality
As briefly mentioned above, as parents cannot directly experience the core educational quality, it can be argued that the visible transformation process of their children is a more important performance-based factor that can greatly influence parents’ satisfaction. Transformative quality is reflected in the process of enhancing and empowering the student. In particular, enhancement means that the learners are not just simply receiving knowledge but are transformed qualitatively by the knowledge learned. Empowerment involves providing students with the chance to direct their transformation (Harvey & Green, 1993). Although the concept of transformative quality has been used in several constructs to measure service quality (Teeroovengadum et al., 2016), it mostly concerns the assessment of service quality from the students’ perspective. To the best of our knowledge, there has not been any research conducted to examine the perceived transformative quality from the parents’ perspective. Therefore, this paper introduces the concept of transformative quality in addition to core educational quality in influencing parents’ satisfaction and loyalty and examines its impact on the concepts. Specifically, we hypothesize that transformative quality will have mediating effects on the liaison between core educational quality and satisfaction, and core educational quality and loyalty (Teeroovengadum et al., 2016).

2.5. The conceptual framework and hypothesis development
The conceptual framework of this paper is illustrated in Figure 1, with parents’ loyalty as the primary endogenous variable. We hypothesize that, aligning with the literature about students’ satisfaction and loyalty, Satisfaction is also hypothesized to have a direct influence on loyalty. Regarding the role of transformative loyalty, we expect that transformative loyalty will mediate the relationships between core educational quality and satisfaction, and between core educational quality and loyalty. In other words, core educational quality is expected to have a direct impact on transformative quality and subsequently, transformative quality is expected to have a direct impact on satisfaction and loyalty.

H1: Core educational quality has a positive impact on loyalty:

H1a: Attitude and behavior have a positive impact on loyalty
H1b: Curriculum has a positive impact on loyalty
H1c: Pedagogy has a positive impact on loyalty
H1d: Competence has a positive impact on loyalty
H2: Core educational quality has a positive impact on satisfaction:
   H2a: Attitude and behavior have a positive impact on satisfaction
   H2b: Curriculum has a positive impact on satisfaction
   H2c: Pedagogy has a positive impact on satisfaction
   H2d: Competence has a positive impact on satisfaction
H3: Transformative quality mediates the liaisons of core educational quality and satisfaction, and core educational quality and loyalty:
   H3a: Attitude and behavior have a positive impact on transformative quality
   H3b: Curriculum has a positive impact on transformative quality
   H3c: Pedagogy has a positive impact on transformative quality
   H3d: Competence has a positive impact on transformative quality
   H3e: Transformative quality has a positive impact on satisfaction
   H3f: Transformative quality has a positive impact on loyalty
H4: Parents’ satisfaction has positive impacts on loyalty
3. Research methods

3.1. Context of the study

To investigate the research hypotheses, we developed a survey questionnaire to solicit opinions from 206 Vietnamese PASESS. As mentioned above, the growing population is one reason for the competition in the education market in Vietnam. According to UNESCO (2020), the school-aged population in Vietnam (9,263,366) is ranked eighth largest in the world. In 2018, there were 8,016,800 secondary students in Vietnam (General Statistics Office of Vietnam, 2020) and a total of 218,488 secondary classrooms across the country (General Statistics Office of Vietnam, 2020), which equates to approximately 37 students per class. As Vietnam is going through a sociocultural transition, the education sector also reflects this phase of the nation’s development. Indeed, the secondary education sector in Vietnam is lively, with competition between traditional and modern educational approaches, since Vietnamese parents often heavily value the importance of both social and academic success (Dandy & Nettelbek, 2002), and thus always want their children to have the best education possible.

3.2. Instruments

The survey questionnaire has two sections. In the first section, we collected demographic information from respondents, including gender, age, and educational level. In the second section, we aimed to measure the variables related to the proposed hypotheses. All constructs’ measurements are adopted from prior well-established instruments with adjustments to suitably measure PASESS’s satisfaction and loyalty (see Appendix)

As the respondents in the research were Vietnamese parents, language adaptation of the research questionnaire had a critical importance. The initial version of the survey questionnaire was written in English (version E1). Following the procedure described by Epstein et al. (2015) and the suggestions of Brislin (1970), we used the back-translation method as follows: One of our co-authors translated E1 into Vietnamese (version V1). Another co-author who had never seen the initial English version was assigned to translate the Vietnamese text into English (version E2). The three versions of the survey questionnaire (two in English and one in Vietnamese) were presented to all the co-authors. Based on extensive discussion and comparison between the authors, a second version in Vietnamese (version V2) was released.

Ensuring the validity of the measurements is an indispensable step when developing a survey questionnaire with latent variables (Hardesty & Bearden, 2004). For face validity, we invited two scholars; one a senior educational researcher, and the other a senior educational practitioner, to revise our version V2 of the survey questionnaire further. Some adjustments in terminology were proposed based on the results of several discussions between the two scholars. In order to check for the face validity of these adjustments, the proposed changes were then discussed by the authors and the scholars and received the general consensus of the group. Thereafter, the changes were adopted into the questionnaire. The content of the final survey questionnaire is shown in the appendix. Furthermore, to ensure that we can confidently based on the measurement items to make the appropriate inferences about the relationship between the latent constructs, construct validity analyses were being conducted as the first step of validity testing. Subsequently, Confirmatory Factor Analysis (CFA) was being conducted to ensure the validity of the entire model to explain how well the measured variables represent the constructs.

3.3. Data collection

An online survey was the selected method for collecting data, since online surveys have several advantages such as having access to individuals living far away, or busy participants (e.g., working parents), and convenience as data are automatically collected (Wright, 2006). The questionnaire was administered via Google Form, which is a widely used platform for online surveys thanks to its convenience and user-friendly interface (T. Tran et al., 2020). In this research, we used the convenient snowball
data collection method, which used our network of educators and teachers across Vietnam to ask them to invite PASESS to participate in our study. The data collection phase began in December 2019. Every two weeks, follow-up emails were sent to remind those who had not yet completed the survey. Totally, 1500 parents were invited to answer our survey. The data collection ended in March 2020 and yielded a sample of 239 respondents, which implied a return rate of 15.93%. However, 30 were eliminated due to incomplete answers. Eventually, we obtained a validated sample of 209. Since structural equation modeling was used to answer the research questions, a minimum sample of at least 200 respondents was appropriate (Hoogland & Boomsma, 1998). The validated sample size of 209 is also satisfied with the rule relating to the parameters estimated in the model (sample size is equal to five times of the questionnaire items), according to Hair et al. (2010). The above data collection process followed strictly the common ethical standards in social sciences and was approved as part of the whole project by an academic committee established by Vietnam’s Ministry of Education and Training.

4. Results

4.1. Confirmatory factor analysis
The descriptive results of the questionnaire provide an overview of the PASESS ratings of the items. All of the items in the questionnaire were rated above the neutral value (4 in 7-point Likert scales). The standard deviations of all the items were in the range of 1.33 to 1.72, which showed a consistent precision of the measurements. Table 2 provides the means and standard deviations, as well as factor loadings of each item.

To verify the measurements, we used confirmatory factor analysis with SPSS and AMOS to ascertain the congeneric measurements model. Specifically, all the multiple fit indices of the model being examined were satisfied by the cut-offs for goodness-of-fit. Table 3 presents the multiple fit indices and their corresponding acceptable levels.

Factor loadings, composite reliability scores (CRs), and average variance extracted scores (AVEs) were used to address convergent validity and discriminant validity, which are the two main analyses for testing construct validity. While convergent validity refers to how well the items measuring the same construct related to each other, discriminant validity ensures that the items of different constructs have enough distinction so they are not related with dissimilar constructs. For convergent validity, as shown in Table 2, the factor loadings of the extracted items were all greater than or equal to 0.80, except for item PED3 (0.79). As indicated in Table 4, all the CRs and AVEs of the concepts were higher than their designated thresholds: 0.7 and 0.5, respectively (see Pham et al., 2019).

Last, we examined the discriminant validity by comparing AVE scores and the squared correlation coefficients between factors. The results show that the AVE scores were higher than the squared factor correlations coefficients, indicating that the measurements in this study satisfied the commonly recommended criteria for discriminant validity.

4.2. Path analyses and hypotheses testing
Figure 2 represents briefly our empirical findings. In general, the results (see Table 5) show that all the endogenous variables can be accounted for by the exogenous variables in the conceptual model. In particular, the proportion of variance explained for loyalty is 75.2%, which is high. The proportion of explained variance for satisfaction and transformative quality are 70.4% and 57.3%, respectively. In the following sections, the confirmatory hypothesis about the impacts of core educational quality on parent’s satisfaction and loyalty are examined in detail. Subsequently, statistics for the role of transformative quality in the conceptual model are investigated to test our hypothesis.

4.3. The role of core educational quality in influencing satisfaction and loyalty
In order to examine the hypotheses based on previous results on the effects of core educational quality to student satisfaction, path analyses of the full model, which included both measurement
and structural models, were conducted and showed that satisfaction had a significant positive relationship with curriculum ($\beta = 0.269, p < 0.001$) and competence ($\beta = 0.728, p < .001$); this means that improvements in curriculum and competence increased parents’ satisfaction with regard to service quality. In contrast, attitude and behavior ($\beta = -0.057, p = 0.667$) and pedagogy ($\beta = -0.171, p = 0.098$) did not have significant effects on satisfaction. Therefore, hypotheses H2b and H2c are supported, while hypotheses H2a and H2c are rejected.

With regard to the effects of exogenous variables on loyalty, attitude and behavior were the only components of core educational quality that showed a significant positive relationship with this endogenous variable ($\beta = 0.305, p = 0.021$). The result indicates that the degree of parent loyalty will increase as the perceived levels of attitude and behavior increase. The relationships of the other components of core educational quality—curriculum ($\beta = -0.221, p = 0.786$), pedagogy ($\beta = -0.153, p = 0.14$), and competence ($\beta = -0.122, p = 0.369$)—with parents’ loyalty were insignificant. In alignment with previous research, satisfaction demonstrated a strong relationship with loyalty ($\beta = 0.78, p < 0.001$). Thus, while H1a is supported, hypotheses H1b, H1c, and H1d are not supported.

4.4. The mediating roles of transformative quality
Once the relationships between core educational quality and parents’ satisfaction and loyalty had been examined, path analyses were used to investigate the role of transformative quality in this conceptual model. With regard to the relationship between core educational quality and transformative quality, the results showed that curriculum ($\beta = 0.244, p = 0.009$) and competence ($\beta = 0.418, p = 0.001$) had significant positive impacts on transformative quality. However, the effects of attitude ($\beta = 0.236, p = 0.136$) and pedagogy ($\beta = -0.091, p = .461$) on transformative quality were insignificant. Therefore, hypotheses H3b and H3d are supported, whereas hypotheses H3a and H3c are not supported.

Looking at the effects of transformative quality on parents’ satisfaction and loyalty, we expected that transformative quality would have positive influences on loyalty directly, and indirect effects via satisfaction. Our results confirmed the former influence by illustrating a significant positive connection between transformative quality and loyalty ($\beta = 0.214, p = 0.004$), indicating that parents’ loyalty increases with the level of perceived transformative quality, thus supporting hypothesis H3f. However, there was no significant effect of transformative quality on satisfaction ($\beta = 0.113$, 

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**Figure 2. A standardized solution of SEM.**

Core educational quality

- **a.** Attitude and behavior
- **b.** Curriculum
- **c.** Pedagogy
- **d.** Competence

**Transformative quality**

**Satisfaction**

**Loyalty**

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**Supported Hypothesis**

**Rejected Hypothesis**
\( p = 0.128 \), which does not support our hypothesis H3e about the direct influence of transformative quality on satisfaction.

Transformative quality can be regarded as a mediator of the two liaisons: core educational quality—satisfaction, and core educational quality—loyalty, if all six hypotheses from H3a to H3f are supported simultaneously. As shown above, three hypotheses, H3b (curriculum—transformative quality), H3d (competence—transformative quality) and 3 f (transformative quality—loyalty) are supported, but not the three others: H3a (attitude and behavior—transformative quality), H3c (pedagogy—transformative quality) and H3e (transformative quality—satisfaction). Thus, we may conclude that transformative quality does not have mediating effects on the relationships between all four components of core educational quality and satisfaction. Transformative quality has mediating effects on two components of core educational quality (i.e., curriculum and competence) and loyalty.

4.5. The influence of satisfaction on loyalty

Our empirical analysis showed that satisfaction had a significant influence on loyalty (\( \theta = 0.691, p < 0.001 \)). Thus, we conclude that H4 is supported.

4.6. Total effects of direct and indirect antecedents of parent's loyalty

Examining the accumulated effects of the exogenous variables on the endogenous ones could provide an overall picture of the research results (see Pham et al., 2019); therefore, calculations of the total effect of the significant latent variables on loyalty were carried out. The total impacts of the variables on loyalty are illustrated in Table 6. According to Acock (2014), effects ranging from 0.2 to 0.5 are considered as moderate and an effect larger than 0.5 is strong. Therefore, overall, it seems that satisfaction was not only the main direct determinant but was also the strongest predictor of loyalty (total effect = 0.691). Competence had the second most effect on loyalty (total effect = 0.592), followed by weaker effects of attitude and behavior (0.305), curriculum (0.238), and transformative quality (0.214). However, it is too soon to draw conclusions about the ranking of the importance of these effects as the differences reported may result from random fluctuations in the data. We suggest that our results on the total effect of these factors should be used as a preliminary basis for relevant research that compares the effects of these factors.

4.7. Discussion and conclusions

In the context of secondary education, the relationships between educational service quality and parents’ satisfaction and loyalty have a crucial role in a school's success. However, the limited existing literature on this relationship has mainly focused on the traditional marketing approach to service quality, without acknowledging the special transformative quality of educational service, which is an essential component. Therefore, this research was conducted to examine the role of transformative quality as a mediator of the relationships between the four components of core educational quality and satisfaction and loyalty of 206 PASESSs in Vietnam.

Using a valid instrument and a conceptual model that fitted well with the data, the results of this research confirm the established relationship between satisfaction and loyalty, which considers satisfaction is the most influential predictor of loyalty (Oliver, 1980; Teeroovengadum et al., 2019). With regard to the impact of service quality, while acknowledging that parents may have different approaches to assessing educational service quality, we still hypothesized that core educational quality could positively influence parents’ satisfaction and loyalty. However, the results indicated that only some components of core educational quality were able to account for the endogenous variables. In particular, only curriculum and competence significantly predicted satisfaction and transformative quality, while loyalty was influenced by attitude and behavior. The results of this educational context research do not support the role of traditional service quality indicators (e.g., core educational quality) in influencing service quality and satisfaction/loyalty, which has been established in previous research (Hutchinson et al., 2009; Sivadas & Baker-Prewitt, 2000). Even in the educational sector, as pointed out by Teeroovengadum et al. (2019), the quality of service
delivery (e.g., core educational quality) has a significant impact on satisfaction. However, we suggest that neglecting the concept of transformative quality in education, which is argued as the most important outcome factor in measuring educational service quality (Harvey & Green, 1993; Teeroovengadum et al., 2019), has significantly reduced the validity of previous research on educational service quality. The research findings also suggest that the measurement of core educational quality in this research was unable to fully capture parents’ assessment of service quality or to predict their satisfaction and loyalty.

However, the results suggest an interesting influence pattern, in which competence and curriculum indirectly influence loyalty via two pathways: transformative quality and satisfaction. In particular, transformative quality and satisfaction are the mediators between the previously mentioned components of core educational quality (i.e., curriculum and competence) and loyalty.

While these two components of core educational quality do not have a direct effect on loyalty, the model suggests that if curriculum and competence can improve parents’ perceived transformative quality, it is likely that this will increase their loyalty. According to Teeroovengadum et al. (2019), core educational quality and transformative quality have simultaneous influences on students’ satisfaction. However, this research on PASESS indicates that the influence of core educational quality on satisfaction is mediated by transformative quality. This mechanism is somewhat supported by the empirical evidence provided by studies with a transformative nature, in which customer satisfaction increased as the service transformed them positively (Akter et al., 2019; Rosenbaum, 2015). This transformation process is unique in the way that it can occur unexpectedly, and heighten consumers’ expectations of future experiences with a similar service (Pham & Lai, 2016). Overall, this result confirms the conviction that parents’ loyalty is based on their perception of positive changes in their children, rather than direct indications of traditional service quality.

4.8. Practical implications

The findings of this research have several implications for the secondary education sector. First, supporting the established results in the literature, satisfaction is the main indicator of the degree of loyalty of PASESS in Vietnam. Educational practitioners, therefore, should focus on probing the prior expectations of parents to be able to satisfy them sufficiently. With regard to the insignificant direct impacts of pedagogy, attitude and behavior on satisfaction, it is likely that parents have less exposure to these in-school factors and place a higher value on the importance of curriculum and competence. As academic achievement is highly valued in many Confucianism-influenced cultures, including Vietnam, teacher competence and curriculum, which are the direct determinants of academic results, are deeply appreciated (Dandy & Nettelbeck, 2002; Huang & Gove, 2015; Wang & Greenwood, 2015).

Second, the results indicate that parents may have a different way of assessing the quality of educational services than the students. Since parents do not directly experience the education themselves, we suggest they directly assess the service quality of secondary education through the cooperative attitude and behavior of the educational staff and the transformation that their children undergo during the educational process. Therefore, secondary schools should focus on improving the professionalism of teachers to form stronger long-term relationships with the parents. Furthermore, secondary schools should follow the recommendations of Harvey and Green (1993) to enhance and empower students to increase the transformative quality of education and thus parents’ loyalty. Enhancing students’ experience in educational institutions is related to the process of value-adding; the educational experience should provide not only knowledge but also personal skills and abilities. The empowerment component suggests that educational institutions should enable students to direct their transformation. As traditional institutions in Vietnam mostly focus on teaching academic knowledge, soft skills development (e.g., social, confidence, critical thinking) and student empowerment have been largely neglected (L. H. N. Tran, 2019). In addition to the growing competition from the private sector, public secondary schools in Vietnam are facing higher demand to achieve fiscal autonomy. Therefore, greater emphasis should be placed on improving their transformative quality to achieve higher parent loyalty.
Last, the mediation roles of transformative quality and satisfaction between the two dimensions of core educational quality (i.e., curriculum and competence) and loyalty showed promising paths for increasing parents’ loyalty. This research suggests that public and private secondary schools should allocate their funding more optimally to increase transformative quality and parents’ loyalty. Our findings suggest that teachers’ competence has the strongest total effect on loyalty among the components of core educational quality. The benefit of improving teaching skills is twofold, as competence influences loyalty via increasing perceived transformative quality and satisfaction. With regard to the effects of attitude and behavior, as well as curriculum, secondary schools should consider these two factors based on their own current goals. As the effect sizes of these two factors are roughly equal, we suggest that schools should invest more in improving the curriculum if their goals include enhancing transformative quality and satisfaction of the parents. With the incentive toward autonomy in secondary education, public schools in Vietnam now have government approval to develop their own curricula (Nguyen, 2019), which inevitably leads to fiercer competition in the educational market. Therefore, in order to retain parents’ satisfaction and loyalty, the development of curriculum is also critical for Vietnamese secondary schools.

4.9. Limitations and directions for future studies
Although the findings of this research are insightful in several theoretical and practical aspects, there still limitations that require scrutiny in future research. The dataset for this research was collected only in Vietnam, which makes generalization of our results and practical recommendations

### Table 1. Demographic background of the respondents

| Characteristics           | Frequency (%) |
|---------------------------|---------------|
| **Gender**                |               |
| Male                      | 33 (15.8)     |
| Female                    | 171 (81.8)    |
| Prefer not to say         | 5 (2.4)       |
| **Age**                   |               |
| 35 years old and under    | 17 (8.1)      |
| 36 to 40 years old        | 59 (28.2)     |
| 41 to 45 years old        | 78 (37.3)     |
| 46 to 50 years old        | 39 (18.7)     |
| 50 years old and beyond   | 16 (7.7)      |
| **Type of work**          |               |
| Public sector             | 119 (56.9)    |
| Private sector            | 64 (30.7)     |
| Other                     | 26 (12.4)     |
| **Residency**             |               |
| Hanoi or Ho Chi Minh City | 164 (78.5)    |
| Other                     | 45 (21.5)     |
| **Level of education**    |               |
| Lower than undergraduate  | 17 (8.1)      |
| Undergraduate             | 88 (42.1)     |
| Postgraduate education    | 101 (48.3)    |
| Other                     | 3 (1.4)       |
| **The grade of the children** |           |
| Lower secondary education | 128 (61.2)    |
| Upper secondary education | 81 (38.7)     |
| Total                     | 209           |
### Table 2. Results of factor loading for CFA

| Items                                                                 | Mean (S.D)   | Factor loading |
|-----------------------------------------------------------------------|--------------|----------------|
| **Attitude and behaviour: 7-point Likert scale (Teeroovengadum et al., 2016)** |              |                |
| ATB1: Teachers understanding students’ needs                           | 5.22 (1.61)  | 0.92           |
| ATB2: Availability of teachers to guide and advise students            | 5.14 (1.70)  | 0.91           |
| ATB3: Behaviours of teachers instilling trust in students              | 5.22 (1.59)  | 0.88           |
| **Curriculum: 7-point Likert scale (Teeroovengadum et al., 2016)**     |              |                |
| CUR1: Clearly defined course content and course objectives             | 4.96 (1.54)  | 0.86           |
| CUR2: Usefulness of module content and design to cater for the personal needs of students | 4.43 (1.72)  | 0.96           |
| CUR3: Challenging academic standards of programmes to ensure students’ overall development | 4.39 (1.69)  | 0.87           |
| **Pedagogy: 7-point Likert scale (Teeroovengadum et al., 2016)**       |              |                |
| PED1: Use of multimedia in teaching (e.g., use of overhead projector, PowerPoint presentations) | 5.12 (1.50)  | 0.90           |
| PED2: Teachers encourage active participation of students in their learning process | 5.22 (1.49)  | 0.95           |
| PED3: Teachers DO NOT Provide regular feedback to students with respect to their academic performance | 5.16 (1.63)  | 0.79           |
| **Competence: 7-point Likert scale (Teeroovengadum et al., 2016)**     |              |                |
| COM1: Theoretical knowledge, qualifications and practical knowledge of teachers | 5.04 (1.33)  | 0.90           |
| COM2: Communication skills of teachers                                  | 5.07 (1.34)  | 0.95           |
| **Transformative quality: 5-point Likert scale (Teeroovengadum et al., 2016)** |              |                |
| TRQ1: Enabling students to be emotionally stable                        | 5.22 (1.61)  | 0.84           |
| TRQ2: Increase in self-confidence of students                           | 5.14 (1.70)  | 0.90           |
| TRQ3: Increase in knowledge, abilities and skills of students           | 5.22 (1.59)  | 0.84           |
| **Satisfaction: 5-point Likert scale (Teo & Soutar, 2012)**             |              |                |
| SAT1: I am satisfied with the decision to choose this school            | 5.14 (1.37)  | 0.94           |
| SAT2: My choice of this school was a wise one                            | 5.06 (1.32)  | 0.96           |

(Continued)
difficult. Although internationalization is prevalent in Vietnam, the ways parents perceive the dimensions of core educational quality and transformative quality, as well as expectations about education, may be different across cultural contexts (Beregovaya & Kudashov, 2019; Gilligan & Outram, 2012; A. Liu & Xie, 2016; Tran, 2019). Therefore, replication of this study in other cultural contexts should be conducted to further validate the role of transformative quality and core educational quality in influencing parents’ satisfaction and loyalty. For example, while curriculum and competence are valued greatly in Vietnamese culture, parents in other cultures might not place such emphasis on these factors. Another limitation that should be addressed is the snowball sampling method of data collection. Despite Table 1 indicating a certain level of diversity in our sample, we hypothesized that the sample in this research could be biased because the parents being introduced by educators and teachers may have a stronger relationship with and involvement in their children’s education. Although having some foreseeable and unforeseeable limitations, the results of this research can hopefully offer some insight into the limited existing literature on the role

| Items                                                                 | Mean (S.D) | Factor loading |
|----------------------------------------------------------------------|------------|----------------|
| SAT3: This school has met my expectations                            | 4.93 (1.43) | 0.94           |
| Loyalty: 5-point Likert scale (Li & Hung, 2009)                      |            |                |
| LOY1: If I have a child studying in secondary school, I will continue to let him/her attend the same school. | 5.12 (1.58) | 0.80           |
| LOY2: When my child is entering secondary school, this school will be my first choice | 5.18 (1.56) | 0.80           |
| LOY3: When my relatives or friends need information about secondary school, I will voluntarily recommend this school | 5.19 (1.49) | 0.87           |
| LOY4: I will encourage my relatives or friends to let their children study in this school | 4.82 (1.66) | 0.87           |
| LOY5: When talking about school with my relatives or friends, I will praise this school voluntarily. | 5.07 (1.53) | 0.90           |

Table 3. Results of multiple fit indices

| Index                  | Result | Acceptable level |
|------------------------|--------|------------------|
| Absolute index         |        |                  |
| Chi-square             | 251.579| -                |
| Degree of freedom      | 184    | -                |
| Chi-square/Degree of freedom | 1.367  | < 5              |
| GFI                    | 0.902  | > 0.9            |
| Parsimony index        |        |                  |
| AGFI                   | 0.866  | > 0.8            |
| RMSEA                  | 0.042  | < 0.08           |
| NFI                    | 0.952  | > 0.9            |
| CFI                    | 0.987  | > 0.9            |
Table 4. Convergent and discriminant validity

| Construct | CR | AVE | Factor correlation |
|-----------|----|-----|--------------------|
|           | ATB | COM | TRQ | CUR | PED | SAT | LOY |
| ATB       | 0.928 | 0.811 |   |   |   | 0.901 |   |
| COM       | 0.924 | 0.858 | 0.858 | 0.926 |   |   |   |
| TRQ       | 0.896 | 0.743 | 0.711 | 0.721 | 0.862 |   |   |
| CUR       | 0.910 | 0.772 | 0.799 | 0.727 | 0.683 | 0.879 |   |
| PED       | 0.917 | 0.788 | 0.854 | 0.815 | 0.632 | 0.757 | 0.888 |
| SAT       | 0.962 | 0.895 | 0.716 | 0.815 | 0.668 | 0.704 | 0.647 | 0.946 |
| LOY       | 0.929 | 0.723 | 0.700 | 0.717 | 0.693 | 0.647 | 0.574 | 0.839 | 0.850 |

Attitude and behavior (ATB); Curriculum (CUR); Pedagogy (PED); Competence (COM); Transformative quality (TRQ); Satisfaction (SAT) and Loyalty (LOY). The bolded diagonal line of values represent the square roots of the AVE for each construct, which were higher than the off-diagonal values, indicating that the construct has more variance with its measurement compared with other constructs. Therefore, the measures being used in this research all achieved discriminant validity (Fornell & Larcker, 1981).

Table 5. Results of SEM

| Dependent variable: TRQ | β coefficient | p value | Hypothesis |
|-------------------------|---------------|---------|------------|
| ATB                     | 0.236         | 0.136   | H3a is not supported |
| PED                     | −0.091        | 0.461   | H3c is not supported |
| CUR                     | 0.244         | 0.009   | H3b is supported |
| COM                     | 0.418         | 0.001   | H3d is supported |
| R2                      | 57.3%         |         |            |

| Dependent variable: SAT | β coefficient | p value | Hypothesis |
|-------------------------|---------------|---------|------------|
| ATB                     | −0.057        | 0.667   | H2a is not supported |
| PED                     | 0.728         | ***     | H2d is supported |
| CUR                     | 0.269         | ***     | H2b is supported |
| COM                     | −0.171        | 0.098   | H2c is not supported |
| R2                      | 70.4%         |         |            |

| Dependent variable: LOY | β coefficient | p value | Hypothesis |
|-------------------------|---------------|---------|------------|
| TRQ                     | 0.214         | 0.004   | H3f is supported |
| SAT                     | 0.691         | ***     | H4 is supported |
| ATB                     | 0.305         | 0.021   | H1a is supported |
| PED                     | −0.153        | 0.14    | H1c is not supported |
| CUR                     | −0.021        | 0.786   | H1b is not supported |
| COM                     | −0.122        | 0.369   | H1d is not supported |
| R2                      | 75.2%         |         |            |

Chi-square = 251.579; degree of freedom = 184; Cmin/df = 1.36; goodness of fit (GFI) = 0.902; adjusted goodness of fit (AGFI) = 0.866; normed fit index (NFI) = 0.952; root mean square error of approximation (RMSEA) = 0.042; The Tucker-Lewis coefficient (TLI) = 0.983 and Comparative fit index (CFI) = 0.987.

Notes: * p < 0.05; ** p < 0.01; *** p < 0.001
of transformative quality in educational service context, which often only focused on the traditional marketing approach to service quality.

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Table 6. Direct, indirect, and total effects of curriculum, competence, attitude and behavior, transformative quality, and satisfaction

| Antecedent         | Direct effect route and magnitude | Indirect effect route and magnitude | Total effect |
|---------------------|----------------------------------|------------------------------------|--------------|
| Curriculum          | /                                | Curriculum—Transformative quality—loyalty: 0.244*0.214 = 0.052 | 0.238        |
|                     |                                  | Curriculum—satisfaction—loyalty: 0.269*0.691 = 0.186. |              |
| Competence          | /                                | Competence—Transformative quality—loyalty: 0.418*0.214 = 0.089 | 0.592        |
|                     |                                  | Competence—satisfaction—loyalty: 0.728*0.691 = 0.503. |              |
| Attitude and behavior | Attitude and behavior—loyalty: 0.305 | /                                  | 0.305        |
| Transformative quality | Transformative quality—loyalty: 0.214 | /                                  | 0.214        |
| Satisfaction        | Satisfaction—loyalty: 0.691      | /                                  | 0.691        |

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Appendix

| English | Vietnamese |
|---------|------------|
| **Attitude and behaviour: 7-points Likert scale** *(Teeroovengadum et al., 2016)* | **Giáo viên hiểu được nhu cầu của học sinh** |
| ATB1: Teachers understanding students' needs | Giáo viên hiểu được nhu cầu của học sinh |
| ATB2: Availability of teachers to guide and advise students | Giáo viên luôn có thời gian để hướng dẫn và tư vấn cho học sinh |
| ATB3: Behaviours of teachers instilling trust in students | Hành vi của các giáo viên tạo ra sự tin nhiệm ở học sinh |
| **Curriculum: 7-points Likert scale** *(Teeroovengadum et al., 2016)* | **Các chương trình học tập có các tiêu chuẩn học tập mang tính thống thực để đảm bảo sự phát triển toàn diện của học sinh** |
| CUR1: Clearly defined course content and course objectives | Nội dung và mục tiêu của chương trình học được xác định rõ ràng |
| CUR2: Usefulness of module content and design to cater for the personal needs of students | Nội dung và hình thức các phần chương trình được thiết kế phù hợp và phục vụ cho nhu cầu cá nhân của học sinh |
| CUR3: Challenging academic standards of programmes to ensure students' overall development | Các chương trình học tập có các tiêu chuẩn học tập mang tính thống thực để đảm bảo sự phát triển toàn diện của học sinh |
| **Pedagogy: 7-points Likert scale** *(Teeroovengadum et al., 2016)* | **Giáo viên khuyến khích học sinh tích cực tham gia trong các tiết học** |
| PED1: Use of multimedia in teaching (e.g., use of overhead projector, PowerPoint presentations) | Giáo viên sử dụng đa phương tiện trong giảng dạy (ví dụ: sử dụng máy chiếu, bài giảng trên powerpoint) |
| PED2: Teachers encourage active participation of students in their learning process | Giáo viên khuyến khích học sinh tích cực tham gia trong các tiết học |
| PED3: Teachers DO NOT Provide regular feedback to students with respect to their academic performance* | Giáo viên KHÔNG thường xuyên cung cấp phản hồi cho học sinh về kết quả học tập.* |
| **Competence: 7-points Likert scale** *(Teeroovengadum et al., 2016)* | **Giáo viên có kỹ năng giao tiếp tốt** |
| COM1: Theoretical knowledge, qualifications and practical knowledge of teachers | Giáo viên có năng lực tốt và có trình độ cao về kiến thức lý thuyết và kiến thức thực tiễn |
| COM2: Communication skills of teachers | Giáo viên có kỹ năng giao tiếp tốt |
| **Transformative quality: 5-points Likert scale** *(Teeroovengadum et al., 2016)* | **Giáo viên có kỹ năng giảng dạy tốt** |
| TRQ1: Enabling students to be emotionally stable | Môi trường học giúp cho học sinh ổn định về mặt cảm xúc |
| TRQ2: Increase in self-confidence of students | Môi trường học giúp tăng sự tự tin ở học sinh |
| TRQ3: Increase in knowledge, abilities and skills of students | Môi trường học giúp tăng cường kiến thức, khả năng và kỹ năng của học sinh |
| **Satisfaction: 5-points Likert scale** *(Teo & Soutar, 2012)* | **Tối hậu lớn khi quyết định chọn con theo học tại ngôi trường này** |
| SAT1: I am satisfied with the decision to choose this school | Tôi hài lòng khi quyết định chọn con theo học tại ngôi trường này |
| SAT2: My choice of this school was a wise one | Lựa chọn ngôi trường này cho con là một sự sáng suốt |
| SAT3: This school has met my expectations | Ngôi trường này đáp ứng được các kỳ vọng của tôi |
| **Loyalty: 5-points Likert scale** *(Li & Hung, 2009)* | **Người tôi còn có con đang học cấp hai, tôi cũng sẽ tiếp tục cho nó theo học tại đây** |
| LOY1: If I have a child studying in secondary school, I will continue to let him/her attend the same school. | Nếu tôi còn có con đang học cấp hai, tôi cũng sẽ tiếp tục cho nó theo học tại đây |

(Continued)
### (Continued)

| English                                                                 | Vietnamese                                                                 |
|------------------------------------------------------------------------|---------------------------------------------------------------------------|
| LOY2: When my child is entering secondary school, this school will be my first choice | Nếu con tôi chuẩn bị vào bậc phổ thông, ngôi trường này sẽ là lựa chọn ưu tiên của tôi |
| LOY3: When my relatives or friends need information about secondary school, I will voluntarily recommend this school | Khi người thân hoặc bạn bè của tôi cần thông tin về trường học, tôi sẽ chủ động giới thiệu ngôi trường này |
| LOY4: I will encourage my relatives or friends to let their children study in this school | Tôi sẽ khuyến khích người thân hoặc bạn bè của tôi cho con cái học ở trường này |
| LOY5: When talking about school with my relatives or friends, I will praise this school voluntarily. | Khi nói về trường học với người thân hoặc bạn bè của tôi, tôi sẽ chủ động khen ngôi trường này |

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