Service marketing mix as input and output of higher and technical education
A measurement model based on students' perceived experience

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Abstract

Purpose – The purpose of this paper is to examine the relationships of service marketing mix (SMM) as service input and service output in terms of students' performance, satisfaction and referral act in context to higher and technical education (HTE) through the application of structural equation modeling.
Design/methodology/approach – A quantitative research, conducted through a self-administered survey composed by a closed-ended structured questionnaire, was incorporated for the students who were enrolled in the technical educational institutions situated in the Khandesh region of India.
Findings – The findings of this study revealed that traditional SMM is statistically linked with the performance of students in terms of skill and knowledge enhancement, satisfaction and referral act of students, which are perceptible new emerging SMM; performance, pleasure and pointing out in terms of service output.
Practical implications – Integrating SMM as service input and service output are productive for HTE in enhancing growth (quantitatively) by the inclusivity of diversified students and development (qualitatively) by enhancing their performance for global standing, making them satisfied and motivating them for recommending their institution to others. This integration can be utilized as a yardstick by the institutions for staying ahead in students' market with a distinctive competitive advantage.
Social implications – Growth and development of HTE will raise a society's quality of life and thereby increase a country's socio-economic status.
Originality/value – The study has exhibited SMM as input and output of a service system that is useful for the growth and development of HTE. The measurement tool presented is effective in (re)framing policies on SMM as service input based on desired service output.
Keywords Higher and technical education, Measurement model, Service marketing mix, Service marketing, India
Paper type Research paper

Introduction

In India, the All India Council for Technical Education (AICTE), a statutory and apex body for regulating and framing policies, designates Technical Education (TE) as programs of higher education in the field of engineering, management and pharmacy education (AICTE, 1987). Higher and technical education (HTE) is vital for developing social aspects, strengthening the industrial growth, driving the economic development of the country (Blom and Cheong, 2010; Vrat, 2009) and lifting individual quality of life (Rojewski, 2010). Although the growth of TE in India has been notable and exponential during the last decade with setting up of new private funding technical educational institutions (TEIs) and increased intake capacity in existing TEIs, it has headed non-directionally. A strategic marketing approach and service quality issues remain in the dialogue box of TEIs solely, which then elicited substantial redundancy in India. TE is critical to India's ambitions of establishing its reputation as a major competitive player in the global knowledge of economy and can be a treasure house in terms of skill enhancements that are directly linked

with the earnings of the individuals and economic growth of the country (Sarma and Sharma, 2014). Several studies revealed diminishing enrollments and closing-down of institutions due to their lack of response to the changing students' behavior pattern. Many authors have recognized the importance of delivering educational services that drive students into the TE setting (Burrell and Grizzell, 2008). In a competitive market with diverse needs, a substantial literature has been transformed on marketing concepts from other service sectors to the education sector (Bugandwa Mungu Akonkwa, 2009). Technical education in India – marketing opportunities and challenges (Goel and Vijay, 2011) sees TE as a powerful medium in manpower development catering to the needs of the industry and society and, noteworthily, contributing to the economic growth of countries. The intention of TE is to provide managerial and technical skills for the overall development of human being (Burton, 1969). In India, the service sector almost contributes 50 percent to the gross domestic product, which creates the significance of service offerings. Indian Government's new projects, Smart City development, Skill India, Digital India, Start-up India, FDI enhancement, National Investment and Manufacturing zone, creation of Industrial Corridor, are heading India toward a global manufacturing hub and also moving to generate a huge number of jobs and entrepreneurial opportunities (Mahajan and Golahit, 2017c). These initiatives are expected to create 10–15 percent rise in employment. The recent union budget has planned to promote new 1,000 private universities for producing trained manpower to meet services and industry requirements along with 100 percent FDI allocation to the education sector. This is the biggest opportunity in terms of involving and developing a rural and tribal population of India, which constitutes almost 60 percent of the Indian population (Census Commissioner of India, 2011). The most important and urgent reform in HTE is, therefore, a necessity to fulfill the needs and aspirations of the rural and tribal students and thereby making HTE the commanding gadget for social, economic and cultural transformation necessary for achieving India's goals.

In India, TE contributes up to 18 percent in terms of enrollments to higher education (MHRD India, 2018; UNESCO, 2015). India has the world's third largest scientific and technical manpower; however, its availability per million country's population is relatively low as compared to other developed countries (Shukla, 2005). According to a recent study made by Wheebox, a leading talent assessment company of India, 75 percent students availing TE rated the Indian TE system below three on a five-scale rating (CII and Wheebox, 2014). As per the statistical dashboard available on the AICTE website, India has around 10 thousand institutions offering TE programs with an intake capacity of 35 lacs as on 2018; however, almost 50 percent seats of intake capacity have not been occupied and around 65 percent of techno-graduate students did not get jobs through their institute's campus placement drive (AICTE, New Delhi, 2018). Thus, the quantitative gap in relation to the intake capacity and actual enrollments and the qualitative gap pertaining to the numbers of students graduating from TE study and their placements in job market are widening year by year. One of the main reasons for diminishing enrollments is the failure to meet the expectations of stakeholders. Secondly, due to the absence of certain quality service standards in TEIs, students are lacking in the skill competency required for the job market (Pal Pandi et al., 2018).

In case of the Khandesh region (India), which is a rural, illiterate and socially backward region of India (Census Commissioner of India, 2011), the situation is even more serious. Prospective students counting almost two and half times more than the intake capacity (available seats) had shown their interest to join TE during the last five years by passing

an entrance examination, which is a prerequisite for TE enrollment. However, the TEIs of this region managed to attract only 40 percent seats of their intake capacity during this period (Directorate of Technical Education, M.S., 2018). Thus, the problems pertaining to awareness, attraction, inclusivity of diversity and providing expected services (Kamokoty et al., 2015; Lakal et al., 2018; Upadhayay and Vrat, 2017) do exist in the region. Marketing of institutions is noticed on TEIs budgetary documents only. Absorption of techno-graduates of this region in the job market is relatively very low as compared to other parts of India. Due to unavailability of an industrial corridor and with very few scattered small-scale enterprises in the region, the techno-graduates of the region have to travel to metro cities for their first job where they have to compete with comparatively higher talented techno-graduates of metro cities. Even if someone from this region secures a job, he or she has to wait for almost one year on an average for his/her first job. Many professionals and educationalists have discussed the challenges of service quality issues by suggesting theoretical and conceptual frameworks; however, they failed to focus on their practical implications and identifying proper measurement instruments (Abdullah, 2006), which are valuable in making strong estimates for growth and development in TE setting.

As per statistical figures manifested above in context to TE scenario, two issues have been identified in terms of quantitative (growth) and qualitative (development) pertaining to the TE scenario in the Khandesh region of India. Based on these issues, the research objectives of this study are formed as stated below.

Research objectives
Primarily, this study has been aimed to examine the service offerings of the TEIs situated in the Khandesh region, India, that govern the growth and development of TE with the following specific objectives:
(1) To examine the students' perceived experience regarding the SMM offered by their TEIs wherein they are enrolled.
(2) To evaluate the impact of SMM provided by their TEIs on their performance enhancement, satisfaction and referral act. To trace out the relationships between SMM as input and output of service delivery.
(3) To propose a measurement model: SMM as input and output of the TE system.

Research questions
Research questions that are to be answered to achieve objectives are:
RQ1. How do SMM offered by TE institutions affect students' performance, satisfaction and referral act?
RQ2. Does any interrelation between SMM exist?
RQ3. Can integration of SMM as service input and output be drawn?
Service marketing mix (SMM), better known as a strategic marketing tool, is accountable for contesting and lining up service providers' strengths to satisfy their customers' needs. A literature review is committed to study the elements of SMM and its impact on customers' performance and behavioral intention. It is also intended to trace out the research gap regarding the utilization and implementation of SMM in an HTE setting.

Literature review
The literature review of this research study has followed a systematic literature review

process that is conducted mainly through two steps (Manatos et al., 2017). This constituted an in-depth and wide search through online databases focusing on the keywords related to the topic and making a descriptive and content analysis based on the statistical methods and findings utilized in the literature.

Service marketing mix (SMM)

SMM is a set of controllable marketing tools that an organization uses to fulfill its marketing objectives to target the customer market to produce the desired response (Kotler, 2000). After the evolution in metaphor of higher education as service (Bringle and Hatcher, 2000; Maringe and Gibbs, 2008; Ng and Forbes, 2009) and students as customers (Clayson et al., 2005; Kotler, 1972), SMM has become the fundamental part of service design for higher educational programs. For a successful marketing plan, right composition of SMM at right time is vital for targeting the desired market to fulfill the needs of students (Young, 2005) and fetching image and reputation for service providers (Blythe, 2008). In case of marketing, a physical product, traditionally a fundamental model comprising of 4Ps, product, price, place (distribution) and promotion, is well-known to the market as a product marketing mix (Blythe, 2008). McCarthy (1960) was the first to present an advanced version of 4Ps in a more simplified way, in the form of 7Ps, which included people, physical evidence and processes. Though the author believed them to be useful for managerial planning and decision making, he failed to create a significant impact in the service sector. Up to the 1980s, even though the 4Ps model gained popularity in terms of producing a strategic solution to the marketing problem, it remained the topic of a debate pertaining to its problems and limitations (Fisk et al., 1993). It had been a topic of core discussions at AMA conference converging to services marketing. Since then, the need for extending 4Ps has been recognized in the context of service marketing. Considering the intangibility nature of service, the importance of customer participation and service delivery, Booms and Bitner (Booms and Bitner, 1981) in 1981 presented the 7Ps model, consisting the original 4Ps along with added Ps: process, people and physical evidence that were more appropriate for services marketing (Blythe, 2008), particularly for education marketing (Ng and Forbes, 2009). SMM elements that have been focused upon in the literature are exhibited in Table I.

Product (program). The "product" element in service marketing is intangible in nature. In the case of higher education context, it is referred to as a "program" offered by the service providers (institutions) to the students. Kotler and Fox (1995) expressed that the quality of program is a major differentiating factor for the service providers of higher education in students market. In TE context, engineering, pharmacy, management, etc., are considered as "programs" of higher education. Due to its intangible, inseparable, variable and perishable nature, it does not exist until the service providers (institutions) deliver it in the presence of the customers (students) (Gajic, 2012). In most of the cases, in India, the program is designed by the affiliating university, the TEIs have less to work on it; however, its execution and delivery through an enriched curriculum is important to keep the interest of the students up. Gibbs and Knapp (2012) suggested wrapping of the program with more tangible, enhanced value-added facilities that keep students engaged. Program enrichment by valued-added services like project-based learning, innovative teaching techniques, add-on or certification courses, information and communication technology-based learning are effective in knowledge and skill enrichment (Parashar and Parashar, 2012). The students are awarded a certified degree (output of program), after attending and successful completion of program curriculum. This degree positions the image of students in the job market, which adds value to their curriculum vitae. Students after their successful completion of program may behave positively by expressing word-of-mouth, which can complement the reputation of the program (Hamid and Noor, 2013). Shay (2014) has mentioned the significance of program

curriculum in minimizing underemployed graduate condition. Agarwala (2008) viewed program importance linked to students' characteristics, intrinsic (interest in program) and extrinsic (benefits sought from the program) that affect their study choice. Gibbs and Knapp (2012) discussed core competencies, profitability, core and tangible offering and, notion of branding as the attributes of a program. That is why, most private universities, deemed-to-be-universities and autonomous institutions in India have now recognized the importance of distinctive and unique attributes of program curriculum in attracting future students and engaging existing students to remain competitive in privatization.

Price. The "price" element is concerned with the cost involved in availing educational service, usually relates to tuition fee, fee concessions, fee reimbursement, fee installments, educational loans, residential changes, food charges and day-to-day expenses. TEI's service price refers to the cost associated with physical facilities, educational processes as well as marketing efforts. In the higher education market, pricing is an extremely sensitive mix that differentiates between brands, values and service offerings of the institutions in a competitive environment (Gibbs and Knapp, 2012), and also boosts managerial accountability and service performance (Maringe and Gibbs, 2008). Agarwal (2006) is of the opinion that pricing plays a limited role in the clearing of demand and supply in higher education due to its embarrassing economy. Kotler (1999) believed that a customer may pay more for a good skilled service. Some service markets perceive expensive service offers to have a greater value and vice versa (Helmsley-Brown and Foskett, 2001). The pricing strategy not only affects the revenue that a TEI derives from admissions fee but also conjointly affects student perceptions of value for money and service quality (Ivy, 2008). Several literature have focused on the importance of price element as the cost of education for the families (Ahier, 2000; Supiano, 2009). In the higher education context, most families are ready to bear a higher cost for high quality (Gajic, 2012); however in India, low family income, farmer families and family having female child (Singh, 2009), perceive "price" as first prima facie criteria to make the decision of selection of TE program. In India, the state governments control and fix the price (Assembly, 2015) for the programs offered by TEIs to ensure that fee charged by institutions are in accordance with the expenses made on educational services, are concern for equity (Agarwal, 2006) and are affordable to the common society. In addition, the Indian government has taken up majority of the "price" burden in terms of reimbursement of tuition fee to the students belonging to socially and economically backward class (Government of India, 2017). Thus, in terms of TE program, the pricing strategy in India is reliable and fit for the purpose, from students' point of view.

Place. Place refers to providing access to the customers that is established through the service networks (Brassington and Pettitt, 2006) and ensures physio-geographical delivery of education services at right time and right place (Hannagan, 1992; Kotler and Fox, 1995). In TE setting, it is concerned with the location (distance) of the institution from home and also refers to the characteristics (locality) of the area in which it is situated (Gajic, 2012). It is measured in terms of convenience, suitability and approachability of the place of service delivery. A good locality surrounded by the transport connectivity, entertainment facilities, medical facilities, safe and secured, and cultured climate will attract prospective students. Further, place is also linked to the accessibility and connectivity to the in-campus classrooms, laboratories, amenities and residential rooms (Maringe, 2006). Institutions situated near to the pool of future students or their schools and colleges is advantageous in attracting them as a small distance of institution will be convenient for them (Hannagan, 1992). If the institution is not situated nearby catchment area, i.e. students market, then the institution must settle in a good attractive location surrounded by necessary amenities and facilities, otherwise, the institution will fail to absorb enrollments. Since India is a

multilingual, multi-religious and multicultural country where, after every four miles the language changes, the place element has a prominent role in students' decision of selecting an institution. Accessibility to the infrastructure and facilities, safe and secured place of amenities and, residential issues are real concerns for the students, especially for females (Singh, 2009). For students, place may be an important concern with regard to the social digital locations of institutions (Khanna et al., 2014) like social blogs, LinkedIn, Facebook, Skype or website (Kotler et al., 2002) for addressing, interacting or sharing information with the other students or friends. Therefore, convenience, locality, safety and security and comfort are the important attributes of "place."

Promotion. Promotion denotes communication sources to convey attributes of service to the existing as well as potential customers (Hannagan, 1992) to create a positive attitude on service offered (Gajic, 2012). In the case of HTE, communication is made with the influencers of the students as well as institutional stakeholders with whom the institution interacts (Shannon, 1996). A lot of literature has revealed the importance of personal selling, media advertising, sales promotion, public relations and publicity in promoting institutions (Armstrong and Lumsden, 2000; Gibbs and Knapp, 2012; Harris, 2009; Shannon, 1996). Promoting service is a complex phenomenon, which includes highlighting tangible assets, clarifying quality service performance and publicizing the experience of satisfied customers (Lovelock and Wright, 1999). With changing environment and technology, promotion is taking a new look as integrated marketing communication (Shannon, 1996). Most educational institutions use public relations than advertising (Kotler and Fox, 1995) as their main promotional tool. Interactive communication sources like educational fairs and counseling visits (personal selling) are effective in approaching potential students that allow institutions to demonstrate their service offerings and overcome their doubts by direct ace-to-face interactions. Social media has been recently gaining popularity and has been found to be effective on the young generation (Chauhan and Pillai, 2013; Khanna et al., 2014; Rutter et al., 2016) in building the brand reputation of institutions, co-creating system of interactive communications and developing relationships with and within the stakeholders.

People. In the HTE context, people include management people, institutional staff, schoolteachers, parents, friends and the students themselves (future, present and former students). Kotler and Fox (1995) and Brassington and Pettitt (2006) are of the opinion that education services, like many other services, depend on both the people who deliver the service as well as people to whom service is delivered. In the HTE system, services as performances and people as performers (Berry, 1995) are crucial due to their motivation and influence associated with teaching, training, interaction and support required from prepurchase (future students) to the post-purchase stage (alumni). As people's emotions, performance and action vary up and down, and the level of consistency in service quality is not certain and is fluctuating (Hannagan, 1992). Therefore, establishing and promoting human interactions are crucial for initiating the "moment of truth" (Kotler et al., 2009) and creating a positive "word-of-mouth" (Bruce and Edgington, 2008) for creating branding for the higher education system. Therefore, people involvement is a key factor for influencing students' satisfaction and motivating them towards positive word-of-mouth for the institutions (Svoboda and Harantova, 2015).

Physical evidence. Physical evidence points out tangible environment that facilitates the performance of service delivery (Palmer, 2001). Kotler et al. (2002) recommend physical evidence such as building, infrastructure and furniture as an immediate clue for prospective students about the service provider's identity. It also includes the availability of physical infrastructure such as; residential buildings (hostels), equipment, computational facilities, library facility, sports, canteen and other amenities. This element is physically visible

(Mukherjee and Shivani, 2016) and along with infrastructure, it also points out physical evidence such as quality of faculty, supporting staff, alumni reputation and institutionalranking or gradation. Delivering services without the presence of physical evidence is not possible for TEIs. Due to its tangible nature, all stakeholder response emotionally and physiologically ultimately affects their behavior. Many institutions engage in integrated and distinctive visual look to their physical infrastructure and facilities to facilitate reputation and reinforce the desired image through publicity brochures, advertising media (Lovelock and Wright, 1999) and social networks. Several service models recognize the unique characteristics of the physical environment which affect service quality (Jain et al., 2013; Teeroovengadum et al., 2016) and customers satisfaction (Kotler and Keller, 2006).

Process. It relates to the whole administrative system in which the service is delivered by the service providers and the service is acquired by the customers (Kotler et al., 2002). It includes all activities starting from enrollment, teaching-learning, extra-curricular activities and the deployment (Kaplinsky and Morris, 2000). Educational processes like academic, non-academic as well as support activities are effective in students' engagement, inside and outside of the classrooms which fallouts to determine institutional performance (Harper and Quaye, 2009) and further purposefully enables engagement of diverse students (Kuh, 2009). Processes are very crucial in keeping the momentum forward to achieve academic and non-academic goals of the students as well as the institutions. Availability, accessibility and responsiveness are thus the key terms associated with service processes, which jointly affect the service quality and effectiveness of the institution. A service process that encourages student engagement through community learning, student–faculty collective research, service-learning, industrial internships and, sports and cultural events are tended to participate mentally rather than engaging students physically by realizing them about their responsibility toward activities (Kuh, 2009). These services contribute directly to the students' retention, engagement, persistence, attrition, performance, satisfaction and trustworthiness which directly are associated with institutional performance (Yorke and Longden, 2004).

Other elements of SMM. Extended SMM elements other than 7Ps are exhibited with literature support in Table I. There are several other Ps publicized in the literature relevant to the service industry. Enache (2011) exposed "placement" in terms of delivering knowledge to the students and making a place for the students in the labor market. Lovelock and Wright (1999) presented eighth P "productivity" as service output for efficient and effective services to add value for customers. Maringe (2006), Ivy and Naudé (2004) and Ivy (2008) described "prominence" as next extended SMM in the form of institutional reputation, which the authors believed the most significant in the selection of an institution. Some studies presented extended SSM "position" as a constitute of institutional image and reputation which are critical in customers buying behavior (Barich and Kotler, 1991) as well as in students retention and loyalty (Nguyen and LeBlanc, 2001). Further, Ho and Hung (2008) believed that creating a distinctive image in the eyes of competitors as well as customers is useful in market positioning and targeting. Reputation and image building are not created overnights, rather it is a prolonged and continuous movement centering on students' satisfaction, students' loyalty and students' placement in the job market (Lafuente-Ruiz-de-Sabando et al., 2018). Several studies (Clemes et al., 2007; Elsharnouby, 2015; Syed Alwi and Kitchen, 2014), have empirical evidence that institutional reputation/image is a significant contributor to students' satisfaction.

Service output elements

Performance (skills and knowledge). Kuh and Wallman (1986) identified knowledge and intellectual development along with social and personal development of the students as the outcome of the education system. Hartman and Schmidt (1995) believed that satisfaction of

students is a multi-dimensional phenomenon affected by both; service providers' performancein service delivery and students' perceptions towards the outcomes of that performance.

Providing educational services that inculcate competitive knowledge and skills in students and make them ready for global competitive market is the responsibility of all stakeholders of HTE (Burli et al., 2012). Employability as a purpose of higher education (Sin et al., 2019) accompanies skill and knowledge enhancement in subject skills (domain skills) and transferable skills (interpersonal attributes) that makes an individual more competitive in the job market. Such a performance determiner is discovered as the major predictor in selecting higher educational institution in India (Nyaribo et al., 2012). In today's scenario, this service output of HTE is becoming prima facie requirement to enter the labor market (Blom and Saeki, 2011), ahead of a degree certificate. Today, HTE institutions are intended to furnish students' performance in terms of developing communication skills, thinking skills and creativity skills of their students and also are attentive to measure whole service activities for the extent of its fulfillment (Venkatraman, 2007). Saravanan (2009) describes soft skills as vital and Gokuladas (2010) exposed it as the most important predictor of employability while, Sahu et al. (2013a, b) referred it as distinctive interpersonal skills for capacity building that keeps the job market competitive. In India, there is a lot of evidence showing the unemployment scenario for techno-graduates is due to their deprived employability skills (Blom and Saeki, 2011). Unni (2016), referring to the Indian scenario, believed that there is no problem with demand and supply of techno-graduates as far as the quantity aspect is concerned, however, the situation is attributed due to the employability skill gap. Several employability skills are expected from techno-graduate students, the majority are related to soft skills and interpersonal skills (Finch et al., 2013; Wickramasinghe and Perera, 2010). As per the report of Wheebox, soft and technical skills, interpersonal skills: leadership and team building, confidence level, general knowledge and intelligence quotient, stress management and idea generation are much in demand of Indian industries, however, Gokuladas (2010) identified them lacking in Indian techno-graduates. This kind of service output in terms of performance enhancement is important for the accumulation of national human capital (National Research Council, 2012). For this reason, measurement of service delivery linked to students' performance related to their skill and knowledge enhancement is vital in HTE. The need has been well recognized by Borden (1964), who proposed ten marketing mix, out of which nine mixes have connections with 7Ps, and "fact-finding and analysis," a tenth mix element have a marketing measurement approach (Quelch and Jocz, 2008) for evaluating performance and controlling service input mix. Beder (2009) mentioned that skills are not generated by TE curriculum, but are reliant on of institution's service facilities and capability and, therefore, performance measurement is important.

Satisfaction. If the institution identifies appropriate measurement tool for improving students' satisfaction, it can provide better services to its students, however, the main difficulty is to find out such a mechanism (Mahajan and Golahit, 2017c). Yelkur (2000) presented a conceptual model that linked the SMM as inputs with the satisfaction of the customers as an output of the HTE system. As rightly said by Kotler (2000) service delivery is successful when it delivers satisfaction to its customers. This state is felt by customers after experiencing value-added performance that accomplishes their expectations (Elliott and Healy, 2001; Kotler and Clarke, 1987). Quite a lot of literatures on service quality models have highlighted importance of customers' satisfaction (Hanaysha et al., 2011; Sakthivel et al., 2005), arising due to the skill and knowledge enhancement as performance (Singh and Khanduja, 2010) and its measurement (Sirvanci, 2004) in HTE setting.

Loyalty and recommendations. In the service industry, most of the future business comes from the existing or experienced customers after experiencing service delivery. For that

reason, Mahajan and Golahit (2017a) perceive pointing-out, i.e. willingness to refer experienced and known services to others is important in growing the enrollments and have stated it as an extended P in TE setting. Studies like, Santini et al. (2017) and Paswan and Ganesh (2009) have revealed the significant impact of satisfaction due to skill gained during the study (Bruce and Edgington, 2008; Greenacre et al., 2014). This further affects students behavioral act of recommendation (de Castro and de Guzman, 2014), loyalty (Annamdevula and Bellamkonda, 2016a, b; Hackl and Westlund, 2000; Thomas, 2011) and word-of-mouth (Alves and Raposo, 2007) for assisting future students.

SMM as service input and service output

Tijjang et al. (2017) have presented SMM as input to the education system and satisfaction of students as an output of the system with mediators; students' decision-making and service quality provided by the institutions. The findings of the study revealed that SMM affects satisfaction with the involvement of mediators such as students' decision-making and service quality. Yelkur (2000) proposed a model that suggested the linkage of SMM (input) on the customer's perceptions and feelings (output) of the service delivery. Chumaidiyah (2014) connected 7Ps to create competitive advantage through a structural diagram. The results revealed that product, price, place, promotion, people, physical evidence and process have a different effect on competitive advantage. Cengiz and Yayla (2007) presented the 4Ps model that the author linked to customer satisfaction and customer loyalty. Hiransomboon (2012) presented the 7Ps model that assists tourists for making their decision of buying accommodation services. Melewar and Saunders (2000) displayed Ps with extended version to trace out its impact on the corporate visual identity of companies. Almost all-earlier literature considered SMM elements as input to the service system to measure its impact on the service output. However, all output elements in the literature have been exposed as a separate entity of service delivery and not a part of the SMM group.

Research gap

Past literature mainly offered the conceptual framework on SMM without sufficient support for empirical research. Martin (2009) believed that traditional Ps have limited orientation based on the assumption; "one size fits all." The traditional 7Ps are not suitable to capture the distinctiveness of marketing in higher education and strongly needs further research work based on its application (Ivy, 2008) as well as further requires conceptual and contextual integration (Lim et al., 2018).

Previous studies utilized SMM for examining marketing performance and branding but found to be lacking in emphasizing the role of SMM in customer satisfaction, service performance and service recommendations. Performance in terms of the skills and knowledge earned by the students during education, satisfaction in terms of service offerings, performance and act of recommending the institute to others shall be examined for the overall growth and development of TE service system. It is equally important to analysis their intermediate correlation also.

Almost all existing literature on SMM have focused its significance as an input to the service industry. Traditional Ps of SMM have been considered as internal factors that are controlled by and favorable for service providers than their customers. As the principal focus of SMM is to satisfy customer needs and wants (Kushwaha and Agrawal, 2015), there are various SMM elements, in terms of customer-oriented behavior arising due to service delivery experience (service output), that are yet to be explored. There is a need for integrating SMM as service input and service output in terms of customers' orientation. Thus, the measurement of input (service provider's orientation) and output (customer's orientation) of the system is even important in reframing inputs provided by service providers. Secondly, if the Ps are not presented as the output of the service system, they

cannot take customer orientation, the need of which is desperately felt by Kotler (2003).
Conceptual framework and the hypothetical model
Based on objectives, research questions and the research gap identified, following are the hypotheses that are to be validated through the proposed hypothetical model (Figure 1) based on the students' perceived experience.

Research hypotheses
Based on literature review and research objectives, following Hypotheses (H01, H02, H03) suggesting no relationships between variables of SMMare proposed. An alternative hypotheses
(H1, H2, H3) will be accepted in case null hypothesis is rejected (Creswell, 2012a, b):
H01. There is no significant relationship between the students' perceptions on SMM and their performance in terms of skill and knowledge enhancement.
H02. There is no significant relationship between the students' perceptions on performance in terms of skill and knowledge enhancement and their satisfaction and referral act.
H03. There is no significant relationship between the students' perceptions on SMM and their satisfaction and referral act.
Research methodology
This study is marketing research pertaining to HTE issues with an objective to study relationships in between SMM offered by the institutions and service output in terms of performance as skill and knowledge enhancement, satisfaction and referral act perceived by the students. The study is also aimed to propose a measurement model that links traditional SMM as input with new emerging SMM as an output of the TE system that uplifts the growth and development of TE in the region. Based on the research objectives the research method is discussed below.

Research design
As suggested by Creswell (2012a, b), the decision of selecting research method is made based on a review of literature and objective of this study. This study has implemented quantitative research method due to its ability in formulating hypothesis (Kotler et al., 2016), to perform multivariate statistical techniques on large data (Donald et al., 2010; Hossler, 1999), to test relationships in between various variables with definiteness and transparency (Borrego et al., 2009), and being popular and successful in educational research (Han, 2014; Sheppard et al., 2010; Tight, 2015). Further, a survey method is administered for its quantitative ability to be counted and having the advantage of allowing a large number of responses quickly (Kolb, 2008). To make availability of students from their busy academic schedule and avoiding favoritism that arises while obtaining existing students' opinions in their own institutional campus is a challenging task. To overcome this situation, a self-administered survey through an internet-Google-form tool has been considered. Internet survey is speedy, low in cost and college respondents are more responsive to such surveys (Neuman, 2014). Sample size ranging from 370 to 381 is recommended for a population ranging from 10,000 to 50,000 at 95% confidence level and 5 percent of significance level (Cohen et al., 2011; Creswell, 2012b; Oakland, 1953; Krejcie and Morgan, 1970). However, as sampling error decreases when sampling size increases, this study accepted 682 (W381) responses that received from an online survey. For TE intake capacity of 6,260 seats for the region, the ratio of sampling size to population size comes out to be 10.9 percent.

Data collection
What the customer actually receives from the service delivery as against his/her expectations from service is typically based on a customer's judgment or evaluation of the

service (Yelkur, 2000). This is why students' perceptions (primary customer) that are crucial factor in the delivery of educational service are taken into consideration. A structured closed-ended questionnaire as presented in the Appendix was constructed as per the guidelines suggested by Cohen et al. (2011) and Neuman (2014). Based on literature review on SMM elements as presented in Table I, it consists of items on the perceived experience of students applied with Likert-Scale (1–5). Respondents were the students who were enrolled either in First, second, third or final year study belonging to TEIs located in the Khandesh region of India. A questionnaire is initiated with asking demographic and geographic characteristics of students in Part-I, while in Part-II it encompasses perceptions on program benefits and self-motives. Role of human influences in their TE career has been questioned in Part-III. Perceived experience on the institutional characteristics in terms of cost of education, location and distance, institution age, and image and reputation has been questioned in Part-IV. Part-V comprises institutional marketing communication activities, and Part-VI covers questions on ratings on the physical facilities and educational processes provided by their TEIs wherein they are enrolled. This questionnaire has also measured service outcome element, skill and knowledge enhancement in Part-VII and other service output elements, students' satisfaction and their referral act in Part-VIII. After taking a pilot study on the few samples from a sampling frame belonging to the Khandesh region, the questionnaire has been finalized for conducting a survey. In total 53 item scales variables together have established this questionnaire which is continuous in nature. After providing sampling frame containing the list of TEIs (simple random sampling) to the affiliating university of this region, the university on researcher's request provided approximately 6,600 e-mail IDs of students who were currently availing their TE study in December 2017. After initial screening for duplicate e-mail IDs and the bounce effect due to invalid e-mail addresses, the survey got a hold of approximately 5,500 e-mail IDs. Finally, primary data consisted of 682 responses which were directly received on researcher's Google account at the end of February 2018, with a response rate of 12.4 percent. There were 466 male and 216 female students by gender. Based on the geographic,165 (24.2 percent) students belonged to the district native place, 285 (41.8 percent) from taluka place and 232 (34 percent) were from village place. There were 76 percent of respondents belonged to the family having an annual income less than Rs. 3 lacs. In total, 73.8 percent of the respondents were availing engineering degree program while 17.6 and 8.5 percent students were studying in pharmacy and management degree program, respectively. In total, 50.4 percent students were studying in the first or second year (juniors) while 40.6 percent were enrolled in the third or final year (seniors) of their program.

Data analysis and findings

To test the relationships between SMM as input and service output, structural equation modeling (SEM) has been adopted. Since last decade, SEM has been successful for the researchers and is popular in the field of psychology, sociology, education (Green, 2016) and economics due to its ability to measure unobserved variables (latent variables) and examining its relationship with the observed variables (indicator variables). SEM identifies a structural relationship among the latent variables with measurement errors (Bollen and Long, 1992). Out of received 682 responses, 642 responses without any missing data are considered for running SEM. Scales items are treated with a scale reduction technique performed by SPSS, the factor loadings of each item to the items are shown in Table II. To develop a valid and reliable scale for each construct and their relationships, exploratory factor analysis (EFA) is performed (Guay et al., 2015). EFA is first implemented to develop item scales, followed by confirmatory

factor analysis (CFA) (Worthington and Whittaker, 2006). EFA is confirmed the covariance or correlations between a set of observed variables (indicators) and unobserved constructs (latent variables). The SEM generally undergoes five steps: model specification, model and parameter identification, parameter estimation, model evaluation or model fit and modifications (if required) (Teo et al., 2013). SEM, a measurement model, is executed as per the guidelines suggested by Hair et al. (2011) and Parasuraman et al. (2005). Measurement model that is executed through SPSS AMOS is exhibited in Figure 2. The SEM model has presented a combination of path models and confirmatory factor models that incorporated both latent and observed variables (Kaplan, 2008). All scales under study are empirically tested for reliability and validity using both EFA and CFA.

Content validity
According to Straub (1989), content validity is to ensure that the scale items are representative
and comprehensive towards formulated hypothesis. The scale items under study are collected from the intensive analysis of the literature (Table I). The scale is designed by considering AICTE regulating norms and accreditation concerns for TEIs. Educational experts like academic and administrative deans and principals of TEIs confirmed 53 scales to be valid after reviewing the scales.

Reliability
Before conducting CFA analysis, items of the measurement scale are determined by computation of item-to-total correlations and Cronbach's α coefficient (Churchill, 1979). The principal component method with Varimax rotation is utilized to include as many factors for easy identification of constructs and to avoid multiple loadings on the constructs (Rennie, 1997). The EFA is executed by SPSS, for automatically calculating the number of factors to be extracted, with specifying suppression value under 0.33 (Ho, 2014). Item-to-total correlations for all 53 scales were W0.33, suggesting no need for scale modifications (Nunnally and Bernstein, 1967). The internal consistency reliability, i.e., stability of individual component across its group of similar scales (Cronbach's α) for six extracted components were noticed ranging from 0.826 to 0.979 which were above 0.6 and, hence, accepted (Nunnally and Bernstein, 1967). In case of third extracted Component C, where the Cronbach's α would have been 0.952 instead of 0.948, if the scale item, location and distance of TEI (CHT1) had been deleted from the group. However, due to its importance mentioned in literature (content validity), this scale item has been retained. Internal consistency is also tested by the split half technique (Ho, 2014), which showed higher correlation with Spearman-Brown coefficient for all scale items ranged between 0.811 to 0.976 and noticed above the requirement level. Table II shows the results of factor analysis and related reliability tests. All 53 scale items exhibited a high level of potential for being factorized, with a Kaiser-Meyer-Olkin (KMO) statistic of value 0.973 (W0.5) and significant results pertaining to Bartlett's test of sphericity (ρ¼0.000 o0.001 with χ^2 ¼ 36,937.961, df¼1378) that symbolizes worthy sign of adequacy for factor analysis (Cerny and Kaiser, Henry, 1977). Floyd and Widaman (1995) recommend sample size ten times greater than the scales to be measured. In this case adequacy of sample size sounds good as the study has undertaken a sample of 642 and 53 scales (ratio W10). The test suggested that the sampling adequacy is good with all scale constructs suitable for factor analysis.

Construct validity
Validity of data relates to the extent to which the scale items correlate positively to the other similar scale under the same component. Validity refers specifically to convergent and discriminant validity within and between scale item sets, respectively. To affirm convergent validity, scales must load strongly and significantly in the hypothesized

direction (Green, 2016). According to Ho (2014), for the inclusivity of a scale into a component of a similar construct, factor loadings above 0.4 are recommendable. Factor loading on the 53 item scales showed that all scales are a good construct of a similar component. There are 42 scales that have factor-loading ranging from 0.9 to 0.7, ten item scales ranged in between 0.7 to 0.4 and 1 item scale that is cost of education (CHT2) having factor loading of 0.360 (refer Table II). Hair et al. (2011) have recommended factor loadings 0.3 and above for a sample size of 350 respondents. Here sample size N¼642 is well above the requirement. Second, due the importance of its content validity, cost of education has been retained even if it carried low factor loading. Critical ratios of all scale items obtained by the CFA showed values above 1.96 at po0.05, which confirmed strong convergent validity (Wong and Merrilees, 2007). Second, average variance extracted (AVE) computed for each construct obtained by EFA showed a value above 0.5 and composite reliability values were found between 0.6 to 0.9 which suggested good convergent validity (Hair et al., 2011). To test discriminant validity, cross loadings of the 53 scales were analyzed on the six constructs (in between the components) to test factor loading above 0.4 for more than one scale across the components. However, no factor loadings above 0.4 were found across the constructs for the same item scales. Discriminant validity was also confirmed by involving pairwise (two constructs at a time) scales to perform PCA, which showed the extraction of two components (constructs) for every pair of constructs (Sultan and Yin Wong, 2012). This procedure demonstrated sound discriminant validity between all pairs of constructs.

Scale reduction and component extraction

Six components are extracted from 53 item scales constituted on SMM elements which accounted for 73.19 percent of variance that exhibited eigenvalue 1.415 (above 1.0). Labeling of Components A, B, C, D, E and F are based on the type of scale items it encloses and its relevance to the reviewed literature as presented in Table I. Components A, C, D and E are illustrative of traditional SMM that is considered as service input mix, while Components B and F are customers' behavioral outcome (service output) of service delivery symbolize new emerging SMM.

Component A. The first latent (construct) variable, Component A, accounted for 22.12 percent of the variance and has emerged from 15 observed variables in total with Cronbach's α¼0.979. Wherein, six observed variables are related to the "physical evidence" element of service mix (scale item PHF1 to PHF6) and nine are associated with the "process" element of mix (scale items PRO1 to PRO9). Thus this Component A is identified as "Physical Evidence+Processes."

Component B. The second latent variable is the outcome of ten observed variables accounted for 13.99 percent of variance with Cronbach's α¼0.974. It is concerned with the skill and knowledge enhancement (scale items PER1–PER10) of students and is termed as "Performance."

Component C. The third latent comprises 13.75 percent of variance with Cronbach's α¼0.946, and is the product of ten observed variables, out of which nine variables are associated with "promotion" mix (MAR1 to MAR9) and one variable is linked with "place" mix (scale item CHT1). This component is labeled as "Promotion+Place."

Component D. The fourth extracted component is derived from eight observed variables accounting 10.44 percent of variance with Cronbach's α¼0.911. It consists eight human influencers (scale items INF1 to INF8) and is acknowledged as "People."

Component E. The fifth component shows 9.4 percent of variance with Cronbach's α¼0.906 resulting from eight observed variables. Five-item scales out of eight are symbolizing perceptions towards TE program benefits (scale items MOT1 to MOT4) and self-motive for program (scale item INF9), and are categorized as "program." One item scale

refers the cost of education (scale item CHT2) signifying "price" element of mix. Last two elements, image and reputation (scale item CHT3), and age of institution (scale item CHT4) are suggesting towards the extended element of mix "prominence." Altogether the fifth component houses eight observed variables that can be described as "Program+Price+Prominence."

Component F. The sixth component exhibited 3.49 percent of variance with Cronbach's α¼0.826 is an outcome of two observed variables satisfaction (scale item SATS) and referral act (scale item REFR). Satisfaction is named as "pleasure", and referral act is labeled as "pointing-out." The whole component, thus, is referred to as "Pleasure+Pointing-out." This component is expressing new emerging Ps, Pleasure (satisfaction) and Pointing-out (referral act).

Model specification

As per the guiding principles of Baxter et al. (2008) on implementing SEM, paths are drawn to distinguish relationships among variables based on the conceptual hypothetical model through SPSS AMOS. One directional arrow represents the relationships (factor loadings) between the observed indicators and extracted latent variables. Components A, C, D and E are connected by the two-way directions of arrow reflecting relationships (correlation) between latent variables (called path coefficients), which are exogenous by nature. Covariance exits because of hypothesized relationships (correlations) among the latent variables. On the other hand, Component B and Component F are endogenous and reliant on Components A, C, D and E, and are connected by a one-way arrow. Variances are estimated for indicator errors associated with the observed variables and the errors associated with the endogenous variables (dependent). Overall, there are 114 total variables in the model with 53 observed variables (measured) and 61 unobserved variables (latent). There are 59 exogenous (independent) variables and 55 endogenous (dependent) variables in the measurement model (refer Figure 2).

Model identification and estimation

Model estimation involves the determination of the value of the unknown parameters (pathways) and the error is associated with the estimated value. Maximum Likelihood estimation method (Green, 2016; Iacobucci, 2010) is selected and AMOS automatically displayed the estimations for all pathways presented in the model with standardized as well as unstandardized estimates, which are presented in Table III. Referring to Table III, variances between the scale items and concerned latent constructs demonstrate strong accountability of scale items toward its latent constructs with standardized estimates ranging from 0.90 to 0.60 suggesting a strong belonging resulting statistical significance with CR ranging from 9.33 to 45.69 (W1.96 at p o0.001). All exogenous Components A, C, D and E are assembled well with CR ranging from 8.12 to 12.46 (W1.96 at po0.001). Referring to Table IV, covariance path between the latent constructs shows a strong relationship with standardized path coefficients ranging from 0.5467 to 0.8046. Highest path coefficient, i.e., correlation is found for Physical Evidence +Process and Program+Price+Prominence (β ¼0.8046, CR¼12.30), and the lowest correlation is observed in between Physical Evidence+Process and People (β ¼0.5467, CR¼9.37).

Referring to Table V, latent construct, Performance, has direct impact due to Physical Evidence+Processes (β ¼0.5388), Promotion+Place (β ¼0.0644), People (β ¼ −0.0858) and Program+Price+Prominence (β ¼0.3768). Observed variable, Pleasure, has indirect effect because of Physical Evidence+Processes (β ¼0.2724), Performance (β¼0.0163), Promotion+Place (β¼0.1943), People (β ¼0.0276), Program+Price+Prominence (β¼ −0.1833) and direct effect due to Pleasure+Pointing-out (β¼0.8272). Similarly,

observed variable, pointing-out, has indirect effect because of Physical Evidence+Processes (β ¼0.2801), Performance (β¼0.0168), Promotion+Place (β¼0.1998), People (β¼0.0283), Program+Price+Prominence (β¼ −0.1885) and direct effect due to Pleasure+Pointing-out (β¼0.8572). Pleasure+Pointing-out, as a combined construct, has both direct and indirect effect accounting due to Physical Evidence+Processes (β; total¼0.3293, indirect¼0.0106, direct¼0.3187), Performance (β; total¼0.0197, direct¼0.0197), Promotion+Place (β; total ¼0.2349, indirect ¼0.013, direct ¼0.2336), People (β; total ¼0.0333, indirect¼−0.0017, direct¼0.350) and Program+Price+Prominence (β; total¼−0.2216, indirect¼0.0074, direct¼−0.2290).

Model fit

It is necessary to examine the hypothesized model by comparing it to the measurement model by observing the extent to which it is consistent with the data, which is called as the goodness of fit. If the goodness of fit is adequate, it supports the plausibility of the relations among variables (Teo et al., 2013). Various model fit indices for the measurement model obtained in this study are noticed in accordance with the fit indices specified in Table VI.

Model modification

Adjustments are made on only some error variances pointed out by AMOS under modification indices tab for connecting them to reduce discrepancy and improved fit of the model (Schreiber et al., 2006) by keeping hypotheses undisturbed. Residual variables for which modification indices are of value 30 and above (Ho, 2014) are connected to produce the final measurement model with improved model fit indices as shown in Figure 2.

Data interpretation and hypothesis testing

Among the nine relationships developed by the SEM model pertaining to traditional SMM (input) and new emerged SMM (output) in terms of performance, pleasure and pointing-out, six latent variables are found statistically significant (CRW 1.96 at p o 0.05) with four being positively related and two have negative influence (refer Table VII).
The SEM measurement model has demonstrated that the operationalization of the concept appears to be stable and the relationships hypothesized appeared to be measuring what this study and hypothesized model has set out to measure. The results also demonstrated a strong predicted ability of latent construct "Performance" (output) with square multiple correlations (R^2) value of 0.7514. This means that the predictors of "Performance" explain 75.14 percent of its variance. However, second service mix output, "Pleasure+Pointing-out," is designated only 14 percent of its variance. As mentioned by Hair et al. (2011), R^2 values of 0.75, 0.50 or 0.25 for endogenous latent variables in the structural model can be described as substantial, moderate, or weak, respectively. Here we can conclude that latent variable, "Performance," has a substantial predicted ability encompassed by "Program+Price+Program" (0.3768) and "Physical Evidence+Processes" (0.5388), whereas, latent variable, "Pleasure+Pointing−out," has a low predicted ability constructed by "Program+Price+Prominence" (0.2290), "Promotion+Place" (0.2336) and "Physical Evidence+Processes" (0.3187). Based on the students' perceived experience on the SMM strategy adopted by TEIs situated in the Khandesh region of India, the hypothetical model is tested and hypotheses validation is described below.
Hypothesis (H01)
• Students' perceived experience on "Physical Evidence+Process" offered by their

TEIs in which they are enrolled is significant with their "Performance" in regard with their skill and knowledge enhanced (CR 11.03 at po0.001), which concludes that H01 is rejected and alternative H1 is accepted for this case. This leads to a rise of 0.5388 units in their "Performance" if "Physical Evidence+ Processes" are raised by 1 unit. Physical facilities, processes, exerted a positive impact in enhancing students' skill and knowledge. Kuh (2009) reported various educational service activities triggering students' engagement are vital for their performance in regard to skills and competencies. These discoveries replicate other findings of the study conducted by Mahajan and Golahit (2017b) showing significance of physical infrastructural facilities, academic and non-academic services on employability skills in context to TE in India. It also supports the study of Jamjoom (2012) where employability skills were found to be distinct with academic-related facilities and extracurricular activities:

• Students' perceived experience on "Promotion+Place" associated with their TEIs is not significant with their "Performance." As students' skill and knowledge enhancement do not have any relationships with "Promotion+Place," H01 is supported and retained. Promotion and Place that are provided by TEIs are not well organized to augment the performance of students.

• "People" influence experienced by the students is significant with their "Performance" (CR −2.25, po0.05), however, negatively associated which determines the rejection of H01 and acceptance of H1. This further tells that when the "People" influence increases by one unit, their "Performance" will be down by 0.0858 unit.

People influence is though significant but not up to the expectations resulting low impact on improving the performance of students. These findings are different to the statement made by Yelkur (2000), who is of opinion that people encourage students to achieve better employability skills. Under pressure situation, arising due to meeting expectation of people could be the worrying factor that results in the low performance of students:

• The perceived experience on a group of "Program+Price+Prominence" of TEIs is significant and shows a positive relationship with the "Performance" of the students (CR 6.43, at po0.001). This fixes the rejection of H01 and confirms alternative H1 for this case. Further, it confirms that SMM, "Program+ Price+Prominence" when goes up by 1, students' "Performance" will go up by 0.3768. This supports beliefs of Jagadeesh (2000) who is of the opinion that that program attributes enhance capabilities and employability skills.

Hypothesis (H02)

• Students' perceived experience on "Performance" in terms of their skill and knowledge development are not significant with their "Pleasure+Pointing−out." H02 is retained here. To be meaningful, students belonging to this region experienced less satisfaction than expected due to their performance, consequentially no act of referral is perceived. In this case, skill and knowledge enhancement is not a significant indicator of satisfaction and referral act. In context to Australian higher education, Mahsood Shah and Widin (2010) stated generic
skill as an important factor for indigenous students; however, the universities are not attentive towards it that is causing dissatisfaction among them. Shah et al. (2010) reported satisfaction because of the development of generic skill in case of offshore students. Results of this study are contradictory to Harvey (2000) and Dacre Pool and Sewell (2007) who believed employability skills are significant performer indicator of satisfaction.

Hypothesis (H03)

• Students' perceived experience on "Physical Evidence+Processes" provided by their TEIs wherein they are enrolled are significant with their perceived experience of

"Pleasure+Pointing-out" (CR 3.26 at Po0.01). Thus, when "Physical Evidence +Processes" goes up by 1 unit, "Pleasure+Pointing-out" will go up by 0.3187 unit. This concludes that H03 is rejected and alternative H3 is accepted.

Students' feelings of satisfaction is greatly determined by physical facilities and processes offered by their TEIs, thereby promoting referral act for their institution. These outcomes are supportive to the findings of Sakthivel et al. (2005), Neelaveni and Manimaran (2015), Mahajan and Golahit (2017a) and Carter (2009) that revealed the impact of students satisfaction on account of campus facilities. It also supports the findings in terms of the positive relationship of service facilities with students' satisfaction and behavioral act of recommending services as discovered by Casidy (2014), Athiyaman (1997), Subrahmanyam (2017), Annamdevula and Bellamkonda (2016a, b) and de Castro and de Guzman, (2014):

• Students' perceived experience on "Promotion+Place" are significantly associated with their perceived experience on their "Pleasure+Pointing−out" (CR 3.03, at po0.01). The effect is positive, which ensures that when "Promotion+Place" increases by 1 unit, "Pleasure+Pointing−out" will increase by 0.2336 unit. Here, H03 is rejected and alternative H3 is accepted.

Marketing communication sources and location of TEIs as per the perceived experience of students are significant constructs to their satisfaction and act of referral. It followed findings of Casidy (2014) who revealed marketing communications to be a significant predictor of satisfaction and action of recommending:

• Students' perceived experience on the surrounding influences, "People" is not significant with their "Pleasure+Pointing−out". H03 is retained in this case.

This states that the surrounding people who are the supporting pillars for the students' TE career do not have any impact on their satisfaction and their referral act perceived. These results are opposite to the views of Sahney et al. (2004), who stated human influence affects students' satisfaction:

• Students' perceived experience on "Program+Price+Prominence" are significant with their perception of "Pleasure+Ponting-out"; however, the negative value indicates that the impact is below the expectation level (CR −2.01, at po0.05). This indicates that if "Program+ Price+Prominence" goes up by 1 unit, their perception of "Pleasure+Ponting−out" will go down by 0.2290 unit. H03 is rejected and alternative H3 is accepted.

The service mix group of price, program and prominence combined shows a significant impact on satisfaction and act of referring, however, with negative inclination. The positive relationship of price (cost of education) and prominence (age and reputation of institution) with satisfaction and referral act as noticed by regression analysis supports the earlier findings of Clemes et al. (2007) and Turkyilmaz et al. (2018). The positive relationship of prominence, institution reputation with students' satisfaction and adherence is in accordance with the earlier findings of Helgesen and Nesset (2007) and Elsharnouby (2015). Price element favoring satisfaction and referral act confirms that various fee reimbursement schemes of the government have taken up most of the financial burden from students and their parents. In terms of program element, regression analysis showed that the quality of life and strengths and talent associated with program as benefits are negatively posed with satisfaction and referral act. This concludes that their self-efficacy referring to the program utilities and self-capabilities are not up to the expectation and are below the perceived value (Jones et al., 2010; Matusovich et al., 2010).

The findings of this study in a different cultural and socio-economic context have ecologically acknowledged earlier findings and nevertheless it has also provided new

findings that are unique and exclusive in the HTE framework. H01–H03 are tested and research objectives 1 and 2 are acknowledged here.

Visionary suggestions and practical implications

Based on the perceived experience of students studying in TEIs situated in the Khandesh region of India, overall, physical evidence and process are noticed to be prime significant indicators (input) for performance, satisfaction and referral act of students. However, people element, which is not significant in this case on the satisfaction and referral act of students and is also negatively positioned with the performance of the students. Therefore, "people" element should be reviewed by TEIs of this region for reframing the policies on human relationships that promote motivation, training, interactions and participations. Parents and institution's staff meetings are necessary for informing families about their children's academic performance and achievements periodically. Institutional staff as a students' guardian (mentor) for taking care of students will be encouraged to feel them protected and affiliated. Students and staff interface should be regularly held with industry, and alumni on campus or at industry places or through video conferencing will be effective for undergoing professional learning experience for students. It will help to enhance their performance, quality of the institution (Abdul Rahman and Unnikrishnan, 2015) and word-of-mouth for their institution (Svoboda and Harantova, 2015). Involvement of all human influencers through direct or indirect interaction will keep students' moral and interest high. Students influencers are powerful in contributing overall satisfaction (Oldfield and Baron, 2000); therefore, people's involvement and interaction is must in delivering and performing service. For these reasons, TEIs of this region should focus on relationship marketing (Gronroos, 1994; Maringe and Gibbs, 2008) that comprehend students, faculty, school-teachers, alumni and industry people as "partners" of the co-creating system, in which long-lasting relationships can be developed. With this approach students will be co-producers of the TE system by accepting their responsibility for participating and performing at their own with the support from the TEIs and other stakeholders of the system (Elsharnouby, 2015). TEIs of this region should develop their social networking sites like Facebook, LinkedIn, Twitter and WhatsApp groups that are advantageous in making interaction and building strong bonding among all stakeholders that automatically facilitate the co-creating system not only in the TE system but also in the society as a whole. Such a system is helpful in transforming students' willingness into acceptance, their engagement into participation, their skills into values, institutional identity into a brand and their professionalism into socialism.

Another SMM element, program attributes that revealed to have a negative command on satisfaction and referral act, is ought to be reframed for enhancing students' satisfaction and referral act. Program attributes as perceived by the students in terms of job prospectus and entrepreneurship should be imparted as expected by them. Separate placement cell and entrepreneurial cell are vital to fulfill students' expectations regarding program benefits. Students should be offered course enrichment by providing add-on or certification courses such as Massive Open Online Courses. Besides program curriculum, TEIs should provide mandatory soft as well as technical skill training to their students as required by industry to enrich their language proficiency, knowledge and skills and to make them employable and competitive in job market. This kind of certification courses and training accomplished during the program curriculum will add value to their curriculum vitae and will raise their market standing. Start-up and project laboratories, research centers, industry and alumni interface and project-based learning that are associated with idea generations are effective in developing entrepreneurship skills and establishments of small starts-up. This will create a development of small-scale enterprises and the opportunity of employment in the region

that will assist in raising the quality of life of individuals and socio-economic status of the region. Service delivery related to program enrichment contributes to upsurge students' self efficacy and motives that create a good campus life experience for them. Most importantly, this makes the program's value more justifiable for what students have accepted it and once the expectations are met, satisfaction will be naturally established.

SMM elements such as promotion and place provided by the TEIs are not significant on students' performance and must be examined again to get the expected performance of their students. This suggests that activities and achievements of students in terms of skill and knowledge enhancement should be promoted through TEIs marketing communication sources. Promoting and publicizing students' performance-based achievements on social media and newspapers are effective promotional tools in appreciating their efforts and achievements and in boosting their morale. Performance-based achievements should be rewarded at the institutional level in terms of cash benefits or compensations that will also create motivation for others. Second, as place element is associated with location and locality of physical facilities and amenities, equipment, playground, laboratories, library sources, hostels, safety and security services, and health and recreational services should be more accessible and convenient so that assist to develop the performance of students. Even digital locations, such as social networking sites, as discussed earlier should be easily accessible for the students for their interactions with other stakeholders that may aggrandize their performance.

Tijjang et al. (2017) revealed that students expect continuous improvement in SMM provided by the institutions and it is not significant on students' satisfaction due to non-progressive development over the service period. Therefore TEIs of these regions are suggested to evaluate SMM periodically and reframe their policies to achieve a desired performance, satisfaction, recommendations and anticipated results. Objective 3 related to proposing visionary suggestions to implement the measurement model in terms of integrating SMM as input and output of the TE system is achieved here.

Students' perceived experience on SMM elements performed through the SEM technique has pulled out the best possible relationship between the service inputs and output. It also has brought out notable emerging marketing Ps, Prominence, Performance, Pleasure and Pointing-out. Incorporating 11 Ps in TE settings ensures value-based outcome; "performance" being valuable to students in terms of employability skill development, "satisfaction" being advantageous to institutional brand development by spreading word-of-mouth, and "referral act" being effective for collective growth in terms of captivating future enrollments. In context to TE setting, these outcomes and its measurement are productive in making TE not only to "grow" quantitatively but also to "develop" it quantitatively. By adopting methodology and empathizing the outcomes mentioned herein, the TEIs of this region can stay ahead in the realm of growing competition along with being an attraction for future students and being a holistic service provider for existing students. Integration of SMM as inputs and output of the TE system pragmatically are valuable in making awareness, attracting, engaging, retaining and making students' employable and, thus, signals strong estimates for growth and development in TE setting. This can be used as a self-assessment and diagnostic tool to measure students' performance, to identify satisfaction level and to predict the act of referring (future enrollments) in relation to institutional service offerings. Students market in the Khandesh region is huge and can be seen as an emerging market and a great opportunity to develop the quality of life of the region. If TE is a treasure house for socio-economic development of rural population, integration of SMM elements is the vital

key for it. Besides strengthening the growth and development of TE, this measurement model is expected to contribute to the socio-economic development of the country by appealing future technocrats and creating capable and satisfied technocrats with sets of required skills that compete to face the emerging global challenges.

Discussions and conclusion

Almost all previous studies have considered SMM as an input to the service system; however, they failed to link them as an output of the service system. SMM as a strategic marketing tool has advanced from the theoretical to practical prospective (Kotler, 1976; Kotler andMcDougall, 1984); however it has been more intended toward service providers than their customers (Kotler, 2003). No doubt, the traditional marketing mix has proved its usefulness in promoting marketing concept by providing a practical framework to the marketing decision making pertaining to the education field for many years (Bennett, 1995). Contradictory, several academicians had objections to the values and future of SMM in terms of its inadequacy and consistency to address specific situations in the marketing of services with technology and time changes (Constantinides, 2006). Gronroos (1989) mentioned that the number of elements representing SMM is too limited for achieving mega marketing, and accessing new market conditions and situations. Grove et al. (2000) recognized the importance of the performance of service from customers' point of view and strongly recommended its addition to SMM list. Graduate employability (students' performance in terms of skill and knowledge enhancement) is agreed to be the key influencer of economic growth in the global knowledge economy (Bridgstock, 2009), which strongly suggests the addition of "performance" in SMM list.

In regard to the marketing of services, Beckwith (2001) was of the opinion that in a changing world, service delivery should be focused on customer satisfaction. For marketing to be a significant contributor to value-adding and continuous movement (Porter, 1985), SMM elements must be assessed through both traditional and emerging marketing domains (Constantinides, 2006). Marketing efforts in today's complex marketplace will succeed only if they are monitored to evaluate the performance of service and satisfaction of customers, and if it brings future business opportunities. As the students' investment in terms of cost, efforts and time is substantial in availing their TE study, their satisfaction resulting from self-development and performance during their academic is important; moreover, such a behavioral measurement (Sander et al., 2014) is most vital in the repositioning of SMM elements. Kotler et al. (2016) pointed out teaching services being intangible among all service industries and SMM elements pertaining to it should be attentive to its depth of intangibility. As SMM conjointly effects on customers engagement, satisfaction and relationships, it should not be limited to the numbers (Kotler and Armstrong, 2017). In TE scenario, most of the future enrollment spring up due to existing or experienced students or their influencers, "Pointing-out," i.e. recommending services to others has a dominant role in attracting future enrollments. Rafiq and Ahmed (1995) are of the opinion that extended marketing mix has been successfully accepted due to its ability of detailing, broadness, integration and comprehensiveness of marketing concepts. As extended SMM exhibited in this study carries that sense and nature approaching customer orientation, it deserves a great scope for future of the TE system in terms of the growth and development of existing TEIs as well as newly established institutions.

This study has evidenced a desperate need of extending SMM and integrating them as input and output of the TE system. Subsequently, the findings have successfully traced

their relationships based on the hypothetical model. In addition to traditional SMM, it has discovered new emerged in terms of "Prominence" as another service input, and "Performance," "Pleasure" and "Pointing-out" as service output. All three SMM elements appertain to service output are also vital as a measurement model for service delivery. It can be concluded that, overall, 11 SMM are examined for their relationships and their correlation in terms of input and output to the TE system showing strong reflections. Such integration of SMM is perhaps the best possible approach that ensures the growth and development of TE that offers strong add-ons to the special characteristics of a dynamic TE environment. The study has provided some and emerging new insights for service providers (TEIs) who intend to improve students as well as institutional performance and for researchers in designing new studies.

Limitations and future research directions
The investigation of this study is dependent on students' perceptions (primary customers). Future research may be worthwhile to develop measuring instruments from the point of other stakeholders of the HTE system. Almost all earlier studies on SMM are oriented to the initial phase, i.e., service selection phase of future students for their inclusivity into the TE environment. Though this study has focused general look on SMM elements, future research involving more investigation on the constructs and scales of SMM that focuses and covers all three students' life cycle, i.e., future-students, current-students and alumni is anticipated. Similarly, this study is linked with TE programs of higher education. Future studies on non-technical programs of higher education like medical and law are appreciated. Finally, the sampling frame involved in this study is confined to the Khandesh region of India, a rural and tribal part of India. Although the findings cannot be generalized, the measurement model exhibited in this study in terms of integrating SMM elements as service input and service output of the TE system can be applied to the other regions of India or even taking it for global consideration. Such a study would facilitate to examine the performance of SMM elements as input and output to the education system in different regions and countries.

Table 1: SMM elements in context to HTE

SN	SMM elements	Literature support
1	**Program**	
	Quality of life	Agarwala (2008), Kinzie *et al.* (2004), Leslie and Brinkman (1988)
	Job prospectus	Agarwala (2008), Lichtenstein *et al.* (2009)
	Talent and strength	Woolnough (1994), Lent *et al.* (2003)
	Entrepreneurship	Capstick *et al.* (2007)
2	**Price**	
	Cost of education	Khanna *et al.* (2014), Ravindran and Kalpana (2012), Sojkin *et al.* (2012)
3	**Place**	
	Location, distance and locality	Khanna *et al.* (2014), Maringe (2006), Paulsen (1990)
4	**Promotion**	
	Media advertisement	Khanna *et al.* (2014), Paulsen (1990)
	Banners and hoardings	Kamath and Sheena (2015)
	Website	Dawes and Brown (2002)
	Social media	Chauhan and Pillai (2013), Rani (2014), Vyas and Sharma (2013)
	Counselling visits	Dawes and Brown (2002), McGrath (2002)
	Educational fairs	McGrath (2002)
	Leaflet and brochure	Wilson *et al.* (2006), Dawes and Brown (2002)
	Sponsorships	O'Mahony and Garavan (2012)
	Publication/Publicity	Cavas *et al.* (2011)
5	**People**	
	Parents	Chapman (1981), Wang and Degol (2013)
	Siblings	Cerinsek *et al.* (2013)
	Relatives	Gajic (2012), Wadhwa (2016)
	Friends	Tripney, *et al.* (2010), Gajic (2012), Wadhwa (2016)
	Current-students	Hayes (2014), Borrego *et al.* (2018)
	Alumni	Abdullah and Saeid (2016), Hayes (2014)
	Schoolteachers	Maringe (2006)
	Institute staff	Wajeeh and Micceri (1997), Maringe (2006)
	Yourself	James *et al.* (1999), Ng *et al.* (2008), Briggs (2006)
6	**Physical evidence**	
	Infrastructure and technology	Mazzarol and Soutar (2002), Sayeda *et al.* (2010), Sakthivel and Raju (2006)
	Amenities and recreational	Sahu *et al.* (2013a, b), Deshmukh (2006)
	Library and computational	Jain *et al.* (2013), Gupta (2011), Deshmukh (2006), Sayeda *et al.* (2010)
	Recognition and gradation	Prasad and Bhar (2010),
	Sports and cultural	Sahu *et al.* (2008), Deshmukh (2006), Das and Mukherjee (2017)
	Campus life	Sakthivel (2007), Paswan and Ganesh (2009), Elliott and Healy (2001)
7	**Process**	
	Faculty and teaching-learning	Bhatia and Bhatia (2008), Narang (2012), Sohani and Sohani (2012)
	Campus placements	Gambhir *et al.* (2016), Khanna *et al.* (2014)
	Industry interactions	Pal Pandi *et al.* (2013), Bhatia and Bhatia (2008)
	Co-and extra-curricular activities	Jain *et al.* (2013), Sayeda *et al.* (2010)
	Safety and security services	Gambhir *et al.* (2016), Elliott and Healy (2001)
	Alumni interaction	Sayeda *et al.* (2010), Sahu *et al.* (2013a, b)
	Skills development programs	Mitra Debnath and Shankar (2012), Deshmukh (2006), Viswanadhan (2009)
	Research activities	Reddy *et al.* (2016), Sharma and Sharma (2015), Subbarao (2013)
	Finance and scholarship	Hossler and Gallagher (1987), Deshmukh (2006), Paswan and Ganesh (2009)
8	**Prominence**	
	Institutional image and reputation	Ravindran and Kalpana (2012), Singh (2013) Mourad (2011), Khanna *et al.* (2014)
	Age of institution	Pushkar *et al.* (2013), Sakthivel (2007)
9	**Position**	Mahajan and Golahit (2017c)
10	**Placement**	Enache (2011)
11	**Productivity**	Lovelock and Wright (1999)
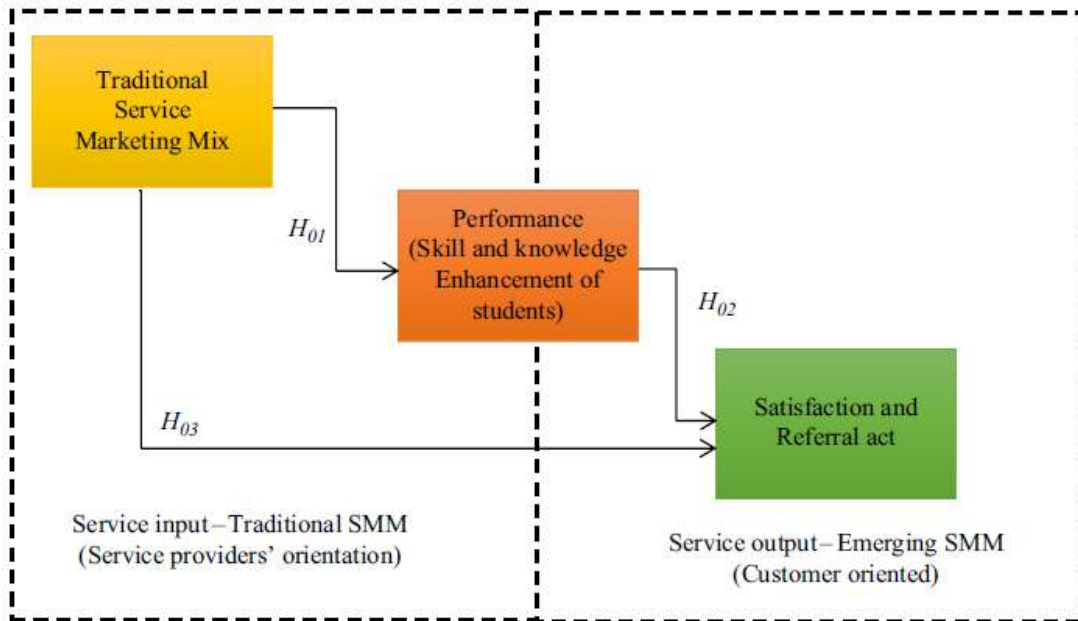
Figure 1: Conceptual framework, hypothetical model and hypotheses

Table 2: Exploratory factor analysis (EFA) with reliability and validity test

| Service mix elements	Code	Item-total correlation	α if deleted	Components extracted from factor analysis					
				A	B	C	D	E	F
Recognition and gradation	PHF4	0.889	0.823	0.794					
Research activities	PRO8	0.870	0.804	0.793					
Co- and extra-curricular	PRO4	0.869	0.794	0.786					
Industry interactions	PRO3	0.867	0.811	0.771					
Safety and security	PRO5	0.859	0.79	0.770					
Library and computational	PHF3	0.878	0.788	0.759					
Campus placements	PRO2	0.872	0.821	0.754					
Sports and cultural	PHF5	0.810	0.751	0.750					
Alumni interaction	PRO6	0.863	0.766	0.747					
Soft and technical skills	PRO7	0.883	0.813	0.746					
Amenities and recreational	PHF2	0.881	0.805	0.735					
Finance and scholarships	PRO9	0.807	0.694	0.728					
Faculty and teach.-learning	PRO1	0.859	0.833	0.681					
Campus life	PHF6	0.863	0.766	0.675					
Infrastructure and techno.	PHF1	0.817	0.767	0.651					
Creativity	PER9	0.901	0.971		0.778				
Stress handling	PER8	0.851	0.973		0.755				
Confidence level	PER7	0.895	0.971		0.737				
Hardworking ability	PER10	0.846	0.973		0.723				
Leadership	PER6	0.870	0.972		0.715				
Team development	PER5	0.904	0.971		0.705				
Intelligence quotient	PER2	0.897	0.971		0.704				
Technical skills	PER3	0.885	0.971		0.703				
Soft skills	PER4	0.886	0.971		0.675				
General knowledge	PER1	0.841	0.973		0.649				
Banners and hoardings	MAR2	0.800	0.939			0.796			
Website	MAR3	0.840	0.938			0.773			
Social media	MAR4	0.835	0.938			0.751			
Leaflet and brochure	MAR7	0.839	0.938			0.748			
Media advertisement	MAR1	0.752	0.942			0.738			
Sponsorships	MAR8	0.810	0.939			0.730			
Educational fairs	MAR6	0.816	0.939			0.712			
News publication	MAR9	0.782	0.940			0.690			
Counselling visits	MAR5	0.767	0.941			0.676			
Location-distance	CHT1	0.520	0.952			0.417			
Alumni	INF6	0.768	0.894				0.787		
Current-Students	INF5	0.762	0.895				0.759		
Schoolteachers	INF7	0.732	0.897				0.753		
TEI staff	INF8	0.726	0.898				0.731		
Friends	INF4	0.726	0.898				0.723		
Relatives	INF3	0.683	0.902				0.683		
Siblings	INF2	0.675	0.902				0.606		
Parents	INF1	0.616	0.907				0.476		
Quality of life	MOT2	0.800	0.883					0.784	
Jobs and career	MOT1	0.773	0.886					0.766	
Talent and strengths	MOT3	0.792	0.884					0.752	
Image and	CHT3	0.733	0.889					0.536	
Yourself (self-	INF9	0.677	0.894					0.530	
Entrepreneurship	MOT4	0.572	0.904					0.517	
Age of TEI	CHT4	0.718	0.891					0.446	
Cost of education	CHT2	0.531	0.908					0.360	
Referral Act	REFR	0.704	–						0.89
Satisfaction	SATS	0.704	–						0.87
Eigenvalue				27.3	4.06	2.47	1.98	1.54	1.4
% Variance				22.1	36.1	49.8	60.3	69.7	*73.1*
Spearman-brown				0.98	0.95	0.81	0.84	0.93	0.83
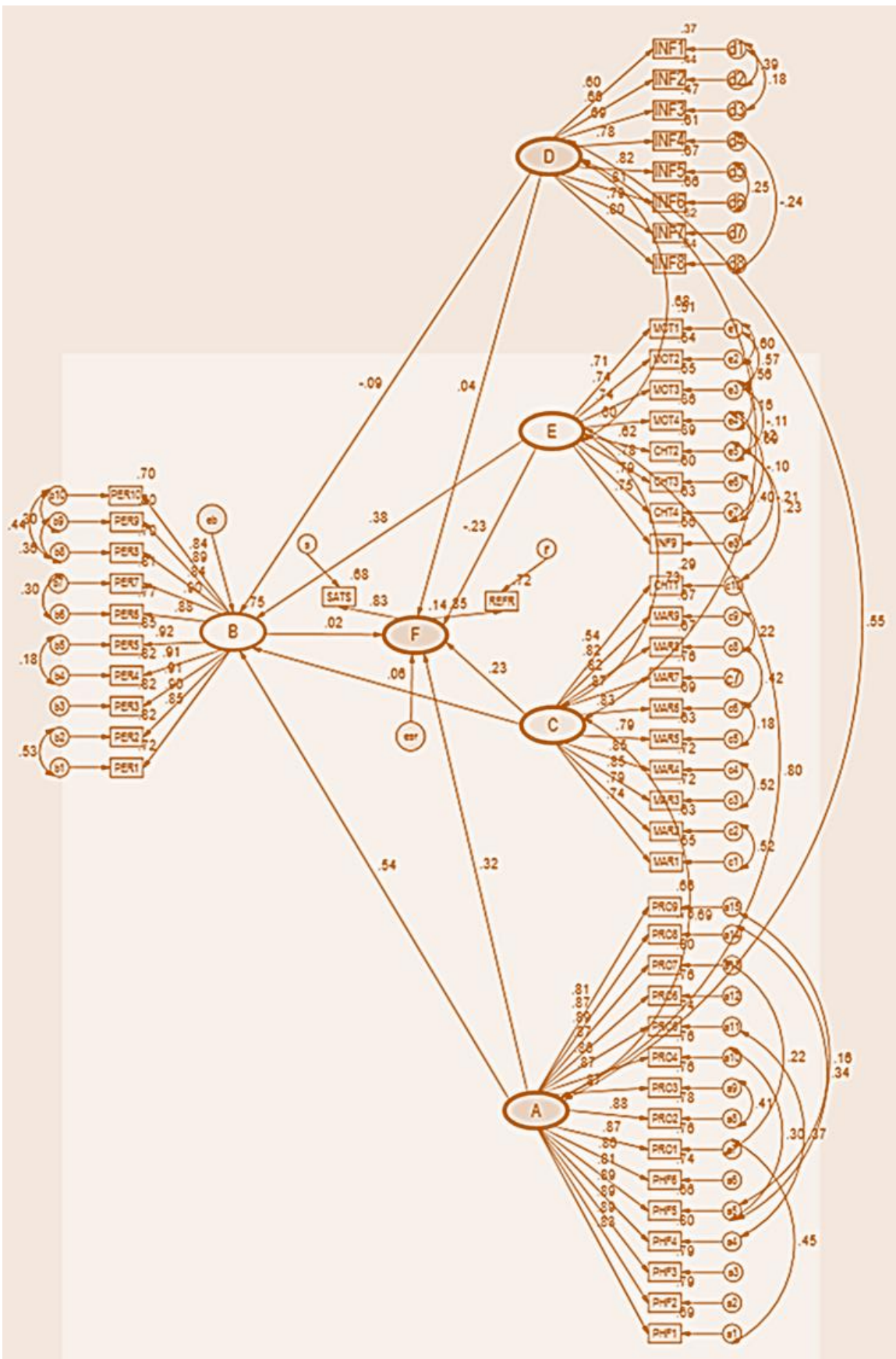
Figure 2: Final measurement model obtained by SEM

Table 3: Exploratory factor analysis (EFA) with reliability and validity test

Component A (physical evidence + processes)

Relationship	SRW	RW	SE	CR	*p*-value
PRO9 ← A	0.81	1.00	–	–	–
PRO8 ← A	0.87	1.06	0.04	27.38	***
PRO7 ← A	0.89	1.08	0.04	28.49	***
PRO6 ← A	0.87	1.07	0.04	27.50	***
PRO5 ← A	0.86	1.06	0.04	26.87	***
PRO4 ← A	0.87	1.07	0.04	27.46	***
PRO3 ← A	0.87	1.05	0.04	27.26	***
PRO2 ← A	0.88	1.09	0.04	27.74	***
PRO1 ← A	0.87	1.02	0.04	27.24	***
PHF6 ← A	0.86	1.07	0.04	26.90	***
PHF5 ← A	0.81	1.01	0.04	26.74	***
PHF4 ← A	0.89	1.07	0.04	28.40	***
PHF3 ← A	0.89	1.08	0.04	28.28	***
PHF2 ← A	0.89	1.03	0.04	28.28	***
PHF1 ← A	0.83	0.98	0.04	25.44	***

Component B (Performance)

Relationship	SRW	RW	SE	CR	*p*-value
PER1 ← B	0.85	1.00	–	–	–
PER2 ← B	0.90	1.06	0.02	45.69	***
PER3 ← B	0.91	1.03	0.03	31.91	***
PER4 ← B	0.91	1.06	0.03	31.99	***
PER5 ← B	0.92	1.08	0.03	32.95	***
PER6 ← B	0.88	1.05	0.03	30.06	***
PER7 ← B	0.90	1.07	0.03	31.43	***
PER8 ← B	0.84	0.99	0.04	27.44	***
PER9 ← B	0.89	1.05	0.03	31.06	***
PER10 ← B	0.84	0.98	0.04	27.59	***

Component C (promotion + place)

Relationship	SRW	RW	SE	CR	*p*-value
MAR9 ← C	0.82	1.00	–	–	–
MAR8 ← C	0.82	0.98	0.04	27.85	***
MAR7 ← C	0.87	1.03	0.04	27.07	***
MAR6 ← C	0.83	0.98	0.04	25.09	***
MAR5 ← C	0.79	0.97	0.04	23.31	***
MAR4 ← C	0.85	1.01	0.04	25.56	***
MAR3 ← C	0.85	1.01	0.04	25.63	***
MAR2 ← C	0.79	0.92	0.04	23.26	***
MAR1 ← C	0.74	0.85	0.04	21.24	***
CHT1 ← C	0.54	0.65	0.05	14.32	***

Component D (People)

Relationship	SRW	RW	SE	CR	*p*-value
INF1 ← D	0.60	1.00	–	–	–
INF2 ← D	0.66	1.11	0.06	17.85	***
INF3 ← D	0.69	1.07	0.07	15.83	***
INF4 ← D	0.78	1.27	0.08	15.51	***
INF5 ← D	0.82	1.34	0.08	15.83	***
INF6 ← D	0.81	1.29	0.08	15.78	***
INF7 ← D	0.79	1.24	0.08	15.57	***
INF8 ← D	0.80	1.36	0.09	15.72	***

Component E (program + price + prominence)

Relationship	SRW	RW	SE	CR	*p*-value
MOT1 ← E	0.71	1.00	–	–	–

Relationship	SRW	RW	SE	CR	p-value
MOT3← E	0.74	1.01	0.04	27.16	***
MOT4← E	0.60	0.87	0.06	14.42	***
CHT2← E	0.62	0.91	0.06	14.46	***
CHT3← E	0.78	1.11	0.06	18.36	***
CHT4← E	0.79	1.13	0.06	18.61	***
INF9← E	0.75	1.08	0.06	18.04	***
MOT2← E	0.74	1.03	0.04	28.10	***

Component F (pleasure + pointing-out)

Relationship	SRW	RW	SE	CR	p-value
SATS←F	0.827	1.00	–	–	–
REFR←F	0.851	1.40	0.15	9.33	***

Component	RW	SE	CR	p-value
A	1.5935	0.1279	12.4614	***
C	1.7381	0.1397	12.4403	***
D	0.9280	0.1142	8.1249	***
E	1.1415	0.1141	10.0028	***

Notes: Relationship: observed variable and latent variable, SRW, Standardized regression weights; RW, regression weights; SE, standard error; CR, critical ratio.***p-value o0.001
Source: SEM performed by SPSS AMOS

Table 4: Correlations and covariance estimates between the latent constructs

Latent variables			β	*B*	CR	*p*o0.001
Component A (Physical Evidence+Process)	↔	*Component C* (Promotion+Place)	0.6893	1.1472	12.2341	***
Component A (Physical Evidence+Process)	↔	*Component E* (Program +Price+Prominence)	0.8046	1.0852	12.3062	***
Component A (Physical Evidence+Process)	↔	*Component D* (People)	0.5467	0.6649	9.3799	***
Component C (Promotion+Place)	↔	*Component E* (Program+Price+Prominence)	0.7296	1.0278	11.7387	***
Component C (Promotion+Place)	↔	*Component D* (People)	0.6873	0.8729	10.4608	***
Component D (People)	↔	*Component E* (Program+Price+Prominence)	0.6838	0.7038	9.8555	***

Notes: β: correlation estimate; B, covariance estimate; CR, critical ratio

Table 5: Direct and indirect effect on the latent constructs

Latent construct	Component	Physical Evidence + Processes A	Performance B	Promotion + Place C	People D	Program + Price + Prominence E	Pleasure + Pointing-Out F
Component B	Indirect	–	–	–	–	–	–
Performance	Direct	0.5388	–	0.0644	–0.0858	0.3768	–
	Total	0.5388	–	0.0644	–0.0858	0.3768	–
Pleasure	Indirect	0.2724	0.0163	0.1943	0.0276	–0.1833	–
	Direct	–	–	–	–	–	0.8272
	Total	0.2724	0.0163	0.1943	0.0276	–0.1833	0.8272
Ponting-Out	Indirect	0.2801	0.0168	0.1998	0.0283	–0.1885	–
	Direct	–	–	–	–	–	0.8572
	Total	0.2801	0.0168	0.1998	0.0283	–0.1885	0.8572
Component F	Indirect	0.0106	–	0.013	–0.0017	0.0074	–
Pleasure +	Direct	0.3187	0.0197	0.2336	0.0350	–0.2290	–
Pointing-out	Total	0.3293	0.0197	0.2349	0.0333	–0.2216	–

Note: Cell contains correlation estimate (β)

Table 6: Fitness of structural model based on model fit indices

Fit indices	Measurement model under study	Recommendable guidelines for model	Literature support	Model fit
χ^2	3416.9014 with df $= 1278$ is significant for $N = 642$	Insignificant for small sample ($N < 250$)	Anderson and Gerbing (1988)	Acceptable for large samples ($N > 250$)
χ^2/df ratio	2.67363	< 3	Hoofs *et al.* (2018) Teo *et al.* (2013) Iacobucci (2010)	Good fit Good fit
Hoelter's critical N	$N = 642$	$N = 256, p < 0.05,$ $N = 263, p < 0.01$	Hoelter (1983)	Good fit
GFI	0.8254	< 0.95	Lomax and Schumacker (2004)	Good fit
AGFI	0.8045	< 0.95	Lomax and Schumacker (2004)	Good fit
RMSEA	0.0511	< 0.05 good fit < 0.08 reasonable fit	Hu and Bentler (1998), Hu and Bentler (1999)	Close to good fit
		< 0.06 good fit	Singh (2009), Browne and Cudeck (1993)	Good fit
CFI	0.9417	> 0.95	Lomax and Schumacker (2004)	Close to good fit
		> 0.90	McDonald and Ho (2002)	Good fit
		Close to 0.95	Hu and Bentler (1999)	Close to good fit
TLI	0.9371	> 0.95	Lomax and Schumacker (2004)	Close to good fit
		> 0.90	McDonald and Ho (2002)	Good fit

Table 7: Integrated SMM and hypothesis testing

Null hypothesis	SMM (input vs output)	SRW	RW	CR	Sig.	Hypothesis support
H_{01}	Performance←Physical Evidence + Processes	0.5388	0.5137	11.03	$p < 0.001$	H1
	Performance←Promotion + Place	0.0644	0.0588	1.59	$p > 0.05$	H_{01}
	Performance←People	0.0858	0.1072	−2.25	$p < 0.05$	H1
	Performance←Program + Price + Prominence	0.3768	0.4245	6.43	$p < 0.001$	H1
H_{02}	Pleasure + Pointing-out←Performance	0.0197	0.0094	0.21	$p > 0.05$	H_{02}
H_{03}	Pleasure + Pointing-out←Physical Evidence+ Processes	0.3187	0.1452	3.26	$p < 0.01$	H3
	Pleasure + Pointing-out←Promotion + Place	0.2336	0.1019	3.03	$p < 0.01$	H3
	Pleasure + Pointing-out←People	0.0350	0.0209	0.48	$p > 0.05$	H_{03}
	Pleasure + Pointing-out←Program + Price + Prominence	0.2290	0.1233	−2.01	$p < 0.05$	H3

Notes: SRW, standardized regression weights; RW, regression weights; CR, Critical Ratio

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