

# The Postgraduate Research Supervisors' Perception of their Role, the Organizational Climate and Postgraduate Research Service Quality

**Krishna K. Govender**  
**Shaun Ramroop**

## **Abstract**

Based on a thorough literature review, a conceptual model was developed, proposing relationships among the postgraduate (PG) research supervisors' perception of their role (RC), their level of organizational socialization (OS), the organizational climate (OC), and the PG research quality (PGSQUAL), as well as the overall research service satisfaction (SERVSAT). This study differs from most previous studies that explored service quality and service satisfaction only from the students' perspective.

The conceptual model was empirically evaluated by obtaining data through an electronic survey conducted among PG research supervisors in a large research university in South Africa and, fitting the data to the model using structural equation modelling. It was ascertained that OS is associated with (influences) OC ( $p = .000$ ); OC is associated with PGSQUAL ( $p = .040$ ); and PGSQUAL is associated with SERVSAT ( $p = .000$ ). These findings imply that higher education management, especially those responsible for PG research must foster an environment which encourages and supports PG research, and that all personnel must be appropriately socialized.

However, contrary to what is espoused in the literature, no relationships were found between the following variables: OS and RC; RC and PGSQUAL; RC and OC. This may be attributed to the small sample size to which many statistical techniques, and model testing in particular are very sensitive.

**Keywords:** postgraduate research service quality, organizational climate, supervisors' role, organizational socialization, service satisfaction

## **Introduction**

Enhancing the PG research experience will not only attract PG research students through 'word of mouth' and other means, but may contribute to successful completion of masers and doctorates (Sayed, Kruss and Badat, 1998). The interaction between the supervisor and PG research student is important in enhancing the service experience and, the supervisor is therefore key to the success of the PG students, since they must provide the expertise, time and support to foster in candidates the skills and attitudes of research, and to ensure the production of a thesis/dissertation of acceptable standard (Heath, 2002).

Although most HEIs and their sub units (faculties and schools) have policies in place to 'regulate' the behavior of the various role-players (inter-alia, supervisor-supervisee) in the PG service encounter, the following questions remain: do the role-players clearly understand their roles; how do they acquire their perception of their role, what influences their perception of their role; and how does role perception influence the perception of the PG research service quality.

In view of the aforementioned, and in an attempt to explore answers to the above questions, this paper reports on research undertaken among PG research supervisors of a large research university in South Africa.

## **Literature Review**

### *The Postgraduate Research Service Encounter*

Service encounters are recognized within the service quality research field as a key concept (Zeithaml & Bitner 2000; Dale 2003), since what happens during the encounter is important in understanding what affects the customers' perception of service quality. Understanding the service encounter has also been identified as a key challenge for service firm managers, having implications for service design, quality control, employee screening and training, and relationship marketing (Bitner, Boons & Mohr 1994; Mittal & Lasser 1996 as cited by Govender 1998). Hill (1995) stated that perceived

higher education (HE) service quality could be the product of a number of service encounter evaluations by students. Such encounters would be with administrators, lecturing staff, academic managers and other HE staff.

The importance of the human element in the service encounter cannot be overemphasized, since it can embed itself in several ways. For example, most service-production processes require the service organizations' personnel to provide significant inputs, both at the front-line of delivery and in those parts of the production process that are relatively removed from the customer (Keltner & Finegold 1996: 57-58).

By citing Bassnett (2003), Hair (2006: 9) postulates that supervisory relationship is very important in the PG research service encounter. In order to manage quality and build lasting relationships, it is important therefore to understand what happens in these encounters.

McAteer-Early (1992) asserts that the customers' perceptions of service quality are highly influenced by the quality of interaction between customers and personnel, and the quality of the interaction is a complex variable which may be affected by subtle factors of verbal and non-verbal communications between personnel and customers. Dann (2008: 333) also asserts that postgraduate research supervision is a complex service encounter drawing on the pedagogical structures of higher education and the interpersonal dynamics of highly customized service delivery.

Several researchers, inter-alia, McCormack (2004), Boud and Lee (2005 as cited by Dann 2008) identified the tensions between the students' expectations of the research degree and their lived experience of the process (expected experience and the reality of the supervision) as a contributing factor to thesis delays or dropout. McCormack (2004: 320, in Dann 2008) identifies the gap between the expectations of the research process and the reality of the research experience as a primary factor in the non-completion of the student's thesis.

In PG research supervision, during face to face interaction between the student and supervisor, there are many opportunities for things to go wrong when the student and supervisor interact, and when both parties experience and respond to each other's mannerisms, attitude, competence, mood, language, etc. Thus 'incidents' occur each time there is interaction, and although some may be trivial, some may be 'critical' to a successful encounter. These 'critical incidents' according to Bitner, Booms and Mohr (1994) as cited by Govender (1998:44) are interactions that are either

'satisfying or dissatisfying' which provide an opportunity for the customers to form an opinion of the service quality.

According to the relationship marketing literature (see Christopher, Payne & Ballantine 1993, as cited by Govender 1998: 32) the practice of relationship marketing is most applicable to a service organization in which, inter-alia, the service customer controls the selection of the service supplier and there is on-going or periodic desire for the service on the part of the service customer. Thus, service encounters, such as that between the PG research student and his/her supervisor (and the institution) can be described as a 'relationship' based series of encounters, since each cannot be viewed as being discrete and in isolation of preceding exchanges. Thus the service experience is the sum total of the student's perception of all encounters (personal and non-personal) with the institution and its representatives.

Although some researchers such as De Beer and Mason (2009: 237) argue for a blended approach to research supervision, where much contact takes place on an electronic basis, and less on a traditional written or face-to-face basis, even if the personal contact is minimized, the students will develop perceptions of their electronic interactions which in turn will contribute towards their perception of the overall PG service experience. More recently there has been a wider acknowledgement that the totality of the student experience of an institution is a useful perspective to adopt in student satisfaction in marketing terms, since service quality is also connected to satisfaction with the performance of a service. In the context of this paper, satisfaction with the supervision service is just one aspect of the elements of the PG service experience, with the other being the perception of service quality.

### *The Postgraduate Research Supervisors' Role in the Research Service Encounter*

Although there are many opportunities for things to go wrong (Govender 1999b: 93) during the service encounter, Lengnick-Hall, Claycomb, and Inks (2000) assert that 'active participation' is unavoidable in the case of human service organizations such as universities and other tertiary institutions.

Some researchers (Gremier *et al.* 1994; Bitner *et al.* 1995 as cited by Govender 1998: 45) have examined the service encounter from the employee's perspective. Since research supervisors are physically and psychologically 'close' to the PG student (customer), they serve a very

important role, and for many PG students, the supervisor is the ‘university’ and an embodiment of the service and quality of service.

Although the amount of day-to-day contact between the individual students and their supervisor(s) can vary dramatically, it is largely via this route that individual students have direct contact and are guided through their interactions with the administrative/academic functions of the institution (Cryer & Mertens, 2003: 93). Cryer and Mertens (2003: 94) further maintain that if supervisors have a responsibility, namely training of postgraduate students, they must also be given the appropriate tools (in terms of adequate training and support) to do their job effectively. These researchers further assert that without training in relevant supervisory and examining skills, it is inevitable that supervisors will fail to meet objectives in the manner that is expected of them.

Some researchers (Rust & Zahorik 1993) have postulated several reasons for poor service, and prime among them were: uncaring employees, poor employee training, negative attitude of employees towards customers, no customer service philosophy within the business, and employees not empowered to provide good service. Zeithaml and Bitner (1996:303) also emphasize that the failure to deliver services as designed and specified can result from a number of employee (human performance) factors, inter-alia, and ineffective recruitment of service-oriented employees, role ambiguity and role conflict among service employees and lack of empowerment.

The role theory perspective recognizes that in any interaction between the customer and the service employee (the service encounter), a number of rules must be observed (Solomon *et al.* 1985 cited by Govender, 2000:144). Kendall (1996: 64) asserts that role which is a basic unit of socialization, implies a social determinism. This implies that roles are assumed as a result of conditioning (socialization) by society. The implied importance of the concept ‘socialization’ on the service encounter, more especially on the role of the research supervisor necessitates further discussion.

### *Organizational Socialization and the Research Supervisor’s Role Perception*

Govender (1999c) cites Wagner and Hollenbeck (1996) who contend that socialization focuses on how individuals learn the beliefs, values, orientation, behaviours and skills necessary to fulfill their role and function effectively

within and organization's milieu. Organizational socialization (OS) is the process which would include, inter-alia, formal training programmes that teach employees the (technical) skills associated with performing their jobs, as well as informal, day to day interactions with employees, managers and customers.

The importance of the socialization of the service employee is further apparent due to the characteristics of services which differentiate services from products. For example, because services are intangible, in many cases, the only tangible evidence available to the customer to compare quality and performance is the contact person with whom they interact. Thus a workforce that is effectively socialized may help to ensure a higher degree of consistency of behaviour of contact personnel as well as a more consistent and hopefully higher level of service.

Several researchers (Lysonski 1982; Boshoff & Mels 1995; and Tait 1996, as cited by Govender 1998: 95) concur that role ambiguity has a negative influence on service quality, because it affects the service employee's performance that spills over to the perception of service quality. Researchers (Singh, Vebreke & Rhoads 1996, as cited by Govender 1998: 94) contend that when an individual has gained an appropriate understanding of his/her role and the roles of other members of the role set, it is possible to formulate accurate role expectations. Schneider and Bowen (1995: 77) concur that in order for the service employee to learn his/her role, and be able to form accurate role expectations, they must be socialized into the organization.

Although a great deal of conceptual and empirical work has been done regarding the socialization of employees of various organizations and its impact upon the employees and customers, the process on OS and its impact on the service encounter, more especially the PG research service encounter has not received much attention.

In view of the aforementioned and on the basis of the literature discussed above with respect to the PG service encounter, it is proposed that:

- P1: The organizational socialization (OS) of the PG research supervisor (RS) is associated with his/her role perceptions (RC).
- P2: The role (RC) as perceived by the research supervisor is associated with their perception of the research service quality (PGSQUAL).

- P3: The organizational socialization (OS) as perceived by the postgraduate research supervisor (OS) is associated with their perception of the research service quality (PGSQUAL).

Several researchers such as Jones (1986), Robbins, 1993 and Srinath, 1993 (as cited by Govender 1999:45) have argued that perceptions of the organizational climate (OC) are the result of organizational socialization. According to McNabb and Sepic (1995: 373), the process of organizational socialization, results in role learning and gaining an appreciation of the climate for service on the part of the individual. Furthermore, Kelly (1987: 88) asserts that since the interaction that takes place between the service organization, employees and customers during the service encounter (in many cases) cannot be clearly specified beforehand, the climate of the organization offers an *ad hoc* means of specifying the specific activities that should be carried out. Kelley (1987) cites Schultz (1982: 445) who explains organizational climate (OC) in terms of role theory and describes role ambiguity as a situation that arises when the employee's work role, that is, the scope and responsibility of the job and what others expect of him/her, is poorly structured and ill-defined.

In view of the aforementioned, the organizational climate literature will be briefly explored to ascertain if any association with the service experience variables could become apparent.

### *Organizational Climate for Research Service*

The work performed by front-line employees' results in increased stress (Zeithaml & Bitner 1996: 307), because they try to meet conflicting demands from management and customers. Schneider and Bowen (1993) as cited by Davidson (2003:20) contend that management can potentially manage the employee's stress by establishing a climate in which the employees' desires to offer good service is made easier and encouraged. Thus the organization's overall 'climate for service', the atmospherics or feel of the setting is very important in shaping both customers' and front-line employee's attitude about the process and outcome of the service delivery.

Schneider, Wheeler and Fox (1992: 706) ascertained that aspects of the organizational climate (OC) relate to service excellence, and found a

relationship between service climate components and facets of customer satisfaction. LeBlanc and Nguyen (1997: 75) ascertained that service quality is 'tied to management's capacity to foster an organizational climate directed at serving the needs of customers'. Davidson (2003: 206) also asserts that any quality initiative that ignores an understanding of the OC is prone to failure, and he also argues that a good OC is a pre-requisite for any successful quality initiative.

Raza (2010:47) cites several research (Thompson 2003; Allen 2003; Volkwein & Zhou 2003; Johnsrud, Heck & Rosser 2000) and asserts that even though some research has been done regarding OC, there is scant research on OC as it pertains to higher education organizations, more specifically, research which links OC to the PG research supervisor's service quality perception.

Based on the above, it is postulated that:

- P4: The organizational socialization (OS) of the research supervisor is associated with their perception of the organizational (research) climate (OC).
- P5: The organizational (research) climate (OC) as perceived by the research supervisor is associated with their perception of their role (RC).
- P6: The OC as perceived by the research supervisor is associated with their perception of the PG research service quality.

### *Service Quality and Service Satisfaction*

The literature identifies 'apparent consensus regarding a fundamental distinction between service quality and service satisfaction' (Cronin & Taylor 1994: 126). Service quality is a long-term attitude, whereas consumer satisfaction with the service is a 'transitory judgement' made on the basis of a specific service encounter (Bolton & Drew 1991; Patterson & Johnson 1993, as cited by Cronin & Taylor 1994: 126). In contrast to the aforementioned, and for the purposes of this study, satisfaction was viewed as an overall (summative) perception of the service experience. Perceptions of service



quality are also developed as a result of a series of service encounters and each encounter produces a particular service experience resulting from satisfaction or dissatisfaction with the encounter.

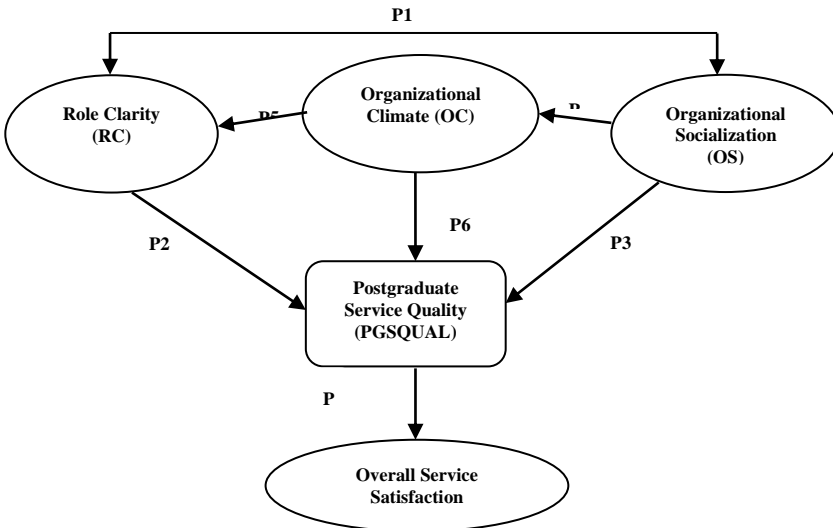
In view of the aforementioned, this study also explored the association between the research supervisors' perception of the postgraduate research service quality and the overall service satisfaction by postulating that:

- P7: The PG research supervisors' perception of the research service quality is associated with their perception of the PG students' overall satisfaction with the service.

### The Conceptual Model

The proposed associations (P1-P7) are captured schematically in Figure 1.

Figure 1: Associations Model



### Research Method

In order to assess the conceptual model (Figure 1), a survey was conducted over a month (April-May 2011) among masters and doctorate research

supervisors at one of the top five research universities in South Africa. A general e-mail was sent to all academics, explaining the nature and purpose of the study, as well as providing a link to the research questionnaire that was uploaded to QuestionPro (www.QuestionPro.com 2010), an electronic research survey vehicle. The timing of the study was important in that it was done at the same time when a survey was being conducted among the 2011 graduating cohort of masters and doctorate candidates.

## **Research Instruments**

Considering that this study draws heavily on the services marketing literature, the tools have been primarily developed through adaptation and refinement of questionnaires from a similar body of literature.

### *Postgraduate Research Service Quality: PGSQUAL*

For the purpose of this study, the PGSQUAL (postgraduate research service quality) instrument was developed primarily by adapting the SERVQUAL (Parasuraman *et al.* 1988) instrument which encapsulates the perceptions-expectations gap covering all five service quality dimensions, and incorporating certain elements from the PREQ (Drennan 2008) and SREQ (Ginns, Marsh, Behnia, Cheng & Scalas 2009), as was done in previous studies (Stodnick & Rogers 2008; Dann 2008; Drennan 2008). The final PGSQUAL instrument comprised 26 items resulting from adaptations that entailed making minor changes to the SERVQUAL statements to fit the context, combining expectations and perceptions, and incorporating certain elements of the PREQ and SREQ. With respect to the 26 items pertaining to specific aspects of the PG research service quality, the respondents were requested to indicate on a 5-point Likert scale whether the PG research service quality was 'better' or 'worse' than expected, where 1= Worse than expected and 5= Better than expected.

### *Research Climate: OCLIMAR*

To ascertain the PG students' perception of the research climate the OCLIMAR instrument was developed by adapting Govender's (1998) organizational climate (OC) questionnaire that was based the work of previous researchers (Kelley 1978; Parasuraman, Berry, Zeithaml 1985). A

further refinement entailed incorporating certain relevant aspects of the postgraduate research experience PREQ questionnaire (Ginns, Marsh, Behnia, Cheng & Scalas 2009), which resulted in a 24-item OCLIMAR questionnaire. The respondents were requested to respond to each of the 24 statements in terms of their perception of the importance the university placed upon various characteristics of the PG research service by indicating their agreement or disagreement with each statement on a Likert scale where 1 = Strongly Disagree; 2 = Disagree; 3 = Neither Disagree nor Agree (Neutral); 4 = Agree; 5 = Strongly Agree.

### *Role Clarity*

By adapting the Role Ambiguity/Role Clarity scale of Chonlo, Howelll, and Bellenger, (1986) a 8-item RC (Table 1) measurement instrument was developed. Respondents were requested to indicate with reference to their Role as PG research supervisors, how certain they were about each statement (Table 1) on a Likert scale where 1 = Completely Uncertain; 2 = Uncertain; 3 = Neither Certain nor Uncertain; 4 = Certain; 5 = Completely Certain.

### *Organizational Socialization*

The organizational socialization as perceived by the PG research supervisors was measured using 15 items expressed on a 5 point Likert scale with anchors of 1= Strongly Disagree and 5 =Strongly Agree, resulting from adaptation of the questionnaire developed by Jones (1986).

### *Overall Service Satisfaction*

This was measured by means of a single item that read: Overall, PG research students are satisfied with the quality of the PG service at this university. The respondents had to indicate their response on a 5-point Likert scale with anchors of Strongly Disagree, Neutral, Disagree, Agree and Strongly Agree.

## **Research Findings**

The majority (62.2%) of the respondents (research supervisors) had a PhD or equivalent, followed by 21.6 % who had a Masters or equivalent qualification. 27% of the respondents spent between 1-5 years at the

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university, followed by 16.2% who spent between 5-10 years and the rest 16.2% who spent between 15-20 years.

The modal masters research supervision experience was 'more than 5 years' for 65.7% of the respondents, and with regard to doctoral supervisions, this applied to 50% of respondents. 68.8% of the respondents indicated that the modal number of Masters students that were successfully supervised was 'more than 4 students', and the modal number of Doctoral students that were successfully supervised was also 'more than 4 students' for 50% of the respondents.

### *Validity and Reliability of Research Instruments*

Coakes and Steed (2003:140) state that there are a number of different reliability coefficients and one of the most commonly used is the Cronbach's alpha, which is based on the average correlation of items within a test if the items are standardised. As reflected in Table 1, the various research instruments produced Cronbach's alpha values which exceeded 0.7, implying acceptable reliability (Coakes & Steed 2003; Nunnaly & Bernstein 1996).

**Table 1: Cronbach's Alpha Reliability Coefficients**

<b>Research Instrument</b>	<b>CRONBACH'S ALPHA</b>
Organizational Socialization (OS)	0.771
Organizational (Research) Climate (OCLIMAR)	0.920
Postgraduate Research Service Quality (PGSQUAL)	0.950
Role Clarity (RC)	0.877

Factor analysis was conducted using the Principal Components Method with varimax rotation to determine the reliability of the items comprising the organizational climate (OCLIMAR), organizational socialization, and post graduate research service quality (PGSQUAL) research instruments. With reference to the Role perceptions (RC)

questionnaire, a factor analysis was not conducted since the research instrument comprised less than 10 items (Coakes & Steed 2003).

It is evident from Table 2, that the items that comprised the organizational socialization questionnaire loaded on five factors, and these factors were ascertained to be fairly reliable as is evidenced by their Cronbach's alpha values reflected in Table 2.

**Table 2: Factor Analysis: Organizational Socialization**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
I have developed my own understanding of the differences between a mini dissertation/ dissertation/ thesis	.841	-.006	.298	.110	-.095
I have developed my own procedures and processes to manage my PG students	.781	.271	.115	.306	.091
I was informed through formal training what is expected of me as a PG Supervisor	.781	.011	.343	.118	-.120
When I first started supervising PG students, I was offered formal training and support	.702	-.401	.113	-.019	.171
I have generally been left alone to discover my role as a PG supervisor	.613	.424	-.294	.120	.332
Much of what I learned about PG Policies and Procedures was from colleagues and through trial and error	.187	.834	-.102	.080	.053
I became aware of my	.316	.633	-.012	.468	.081

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role as a Supervisor mostly through interaction with other colleagues and through trial and error					
I supervise PG students the same way as I was supervised as a PG student	.020	.566	.353	-.139	-.024
I know the differences between a mini dissertation/dissertation and thesis because this is captured in university documents	-.049	.116	.792	.046	.080
I became aware of the PG Rules and Regulations from formal sources	.145	-.144	.630	.449	.205
I was informed of what standard of work to expect of students for a mini dissertation/dissertation/thesis	-.489	-.054	.547	-.288	-.218
In my faculty/school we have formal processes to handle PG matters	.218	.051	-.044	.820	.051
I have learnt about research support services available to PG students from colleagues	-.124	.065	.172	.685	-.380
My line manager/university informed me of the research values that are important to the university	.060	.232	-.064	.033	.817

I became aware of the PG Examination and Administration procedures through formal sources	-.039	-.154	.217	-.128	.775
<b>Cronbach's Alpha</b>	<b>.770</b>	<b>.735</b>	<b>.758</b>	<b>.704</b>	<b>.767</b>

It is evident from Table 3, that the items that comprised the organizational climate questionnaire loaded on six factors, and these factors were ascertained to be fairly reliable as is evidenced by their Cronbach alpha values reflected in Table 3.

**Table 3: Factor Analysis: Organizational Climate for Research**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
PG students are free to discuss their research needs	.838	.055	.159	.318	.066	-.099
A reputation for good research is emphasized	.825	-.094	.177	.052	.043	-.201
Individual student attention is stressed in PG studies	.783	.195	.335	.235	.089	-.180
PG students have access to good technical (research) support	.700	.049	.096	.029	.386	.321
PG students are encouraged to undertake further PG research	.695	.084	.016	.421	.227	.100

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PG students are provided with opportunities to become integrated into the broader department/ school/ university research culture	.456	.270	-.369	.080	.321	-.123
PG Students are fully informed of the costs associated with PG studies	.073	.843	.160	.082	.233	.019
PG Students are made aware of appropriate financial support for research activities	-.113	.831	.047	.195	.092	-.022
PG Students are informed about the various research development and support services available	.098	.751	.332	.099	.147	-.038
Promises to PG students are always honoured	.427	.660	.368	-.109	-.065	.307
PG students are assured of consistent and prompt service and support	.020	.345	.741	.289	.133	.088
PG students' best interest is at heart at all times	.203	.232	.715	.272	.130	.083
PG Students understand the service being provided	.126	.073	.712	-.125	.370	.024



PG students can depend on the services provided	.323	.309	.706	.231	.230	.045
Operating hours are convenient for PG students	.096	.201	.063	.737	.082	.062
PG staff are friendly and polite at all times	.391	.019	.283	.691	.014	.042
PG students receive confidential service	.271	.122	.355	.617	.091	-.384
The research ambience in the department/ school stimulates PG research	.508	.026	-.055	.576	.309	-.038
PG Students have access to suitable working space	.243	.306	.105	-.003	.804	-.018
Opportunities are provided for social contact with other postgraduate students	.149	-.009	.339	.093	.747	-.099
PG students have access to up to date computing facilities and services	.085	.220	.230	.343	.702	.115
PG staff are properly trained and prepared	.015	.354	.370	.169	.069	.711
Seminar programmes are provided for PG students	.429	.421	.064	.181	.120	-.667
<b>Cronbach's Alpha</b>	<b>.872</b>	<b>.856</b>	<b>.858</b>	<b>.786</b>	<b>.792</b>	<b>.714</b>

Table 4 reflects the results of the reliability analysis of the postgraduate research service quality questionnaire.

**Table 4: Factor Analysis: Postgraduate Research Service Quality (PGSQUAL)**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Delivering on promises made to PG students to do something by a certain time	.822	.263	.259	-.003	.248	-.028
Sincerity of staff in solving PG students' problems	.814	.363	.123	-.019	.222	.181
Performing the PG services right the first time	.791	.356	.133	.065	.090	.096
Opportunities provided to PG students for social contact with other PG students	.740	-.150	.150	.159	.077	.269
Always having the PG students' best interest at heart	.734	.455	.252	-.085	.249	.197
Research support services available to PG students	.729	-.222	.229	.374	-.142	-.005
The ability of staff to answer PG students' queries	.688	.209	.278	.245	.217	.342
Honouring promises made to PG students	.654	.340	.388	-.040	.186	.105
The personal attention given to PG students	.577	.445	.386	.128	.318	.202
Willingness of staff to assist PG students	.100	.787	.109	.137	.140	.471
The courteousness of staff towards PG students	.139	.776	.253	.170	.123	.345
Accuracy of PG records	.357	.775	-.094	.066	.126	-.005

Financial support for PG students' research activities	.243	-.189	.780	.323	-.062	.075
Never being too busy to respond to PG students' requests	.384	.383	.708	.035	.199	.081
Telling the PG student exactly when the services will be performed	.395	.227	.615	.150	.254	.310
The promptness of the services offered to PG students	.442	.163	.585	-.017	.276	.371
The personal attention given by staff to PG students	.462	.448	.477	.154	.247	.175
PG research ambience in the department/school	.143	.230	-.080	.872	-.054	-.009
Seminar programmes provided to PG students	-.034	.085	.391	.793	.117	.154
Opportunities provided to PG students to become integrated into the broader department/school/university research culture	.074	-.133	.117	.652	.491	.134
Freedom allowed to PG students to discuss their research needs	.351	.408	.153	.525	.506	.134
The confidentiality with which staff deal with PG student issues	.290	.179	.312	-.119	.762	.108
Efforts made to ensure that PG students develop an understanding of the standard of work	.126	.234	.100	.464	.734	-.033

expected						
Modernness of library resources and services for PG students	.497	.146	-.311	.175	.504	.231
The convenience of university operating hours for PG students	.243	.124	.190	.144	-.045	.837
Ability of staff to understand PG students' needs	.143	.312	.083	.014	.171	.736
<b>Cronbach's Alpha</b>	<b>.944</b>	<b>.851</b>	<b>.889</b>	<b>.831</b>	<b>.703</b>	<b>.708</b>

It is evident from Table 4 that the items comprising the organizational socialization questionnaire loaded on six factors, and these factors were ascertained to be fairly reliable as is evidenced by their Cronbach's alpha values reflected in Table 4.

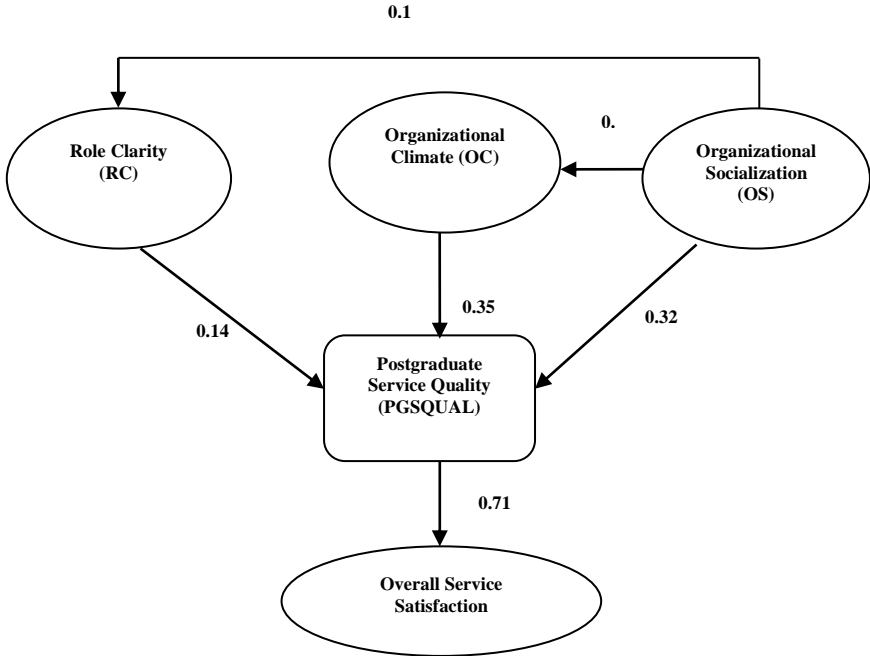
### **Results and Findings: Structural Equation Modelling**

The variables in the hypothesized model were transformed into univariate variables by taking the average of these variables. Thereafter the hypothesized model was fitted as a structural equation model to the data using AMOS (Version 19). The hypothesized model (Figure 1) did not fit the data well and is not reported on for obvious reasons. However a revised model (Figure 2) was fitted to the data, and the only difference between the hypothesized model and revised (new) model being that the relationship between RC and OC was now removed. The data was then fitted to the new model using AMOS (Version 19), and the goodness of fit reported.

The chi-square test statistic was calculated as 7.648 (p-value=0.113) indicating that the model fits the data well (Byrne 2010). According to Byrne (2010), and Schumacker and Lomax (2004), the RMSEA should be less than 0.05 if the model fits the data well (although values ranging from 0.05 to 0.08 are also deemed to indicate that the model fits the data well) and, the ECVI of the fitted model should be less than the ECVI of the saturated model. The RMSEA was reported as 0.055 and the ECVI of the fitted model was 1.096

whilst the ECVI of the saturated model was 1.191. Hence, the model fitted the data well.

**Figure 2: Empirical Evaluation of the Conceptual Model**



**Table 5: Results of the SEM**

		Estimate	P-VALUE
RC	<--- OS	.103	.687
OC	<--- OS	.835	.000*
PGSQUAL	<--- OS	.319	.211
PGSQUAL	<--- RC	.140	.312
PGSQUAL	<--- OC	.346	.040*
OVERALL SATISFACTION	<--- PGSQUAL	.713	.000*

\*Significant at the 5% level.

It is evident from Table 5 that OS is significantly associated with OC (p-value=0.000), and OC is significantly associated with PGSQUAL (p-value=.0.04). The aforementioned findings concur with that of other researchers (Schneider, Wheeler & Fox 1992) who ascertained that aspects of the organizational climate (OC) relate to service excellence. LeBlanc and Nguyen (1997) also ascertained that service quality is 'tied to management's capacity to foster an organizational climate directed at serving the needs of customers'. Davidson (2003: 206) also asserts that any quality initiative that ignores an understanding of the OC is prone to failure, since he also argues that a good OC is a pre-requisite for any successful quality initiative

It was also ascertained that PGSQUAL influences the overall satisfaction with the PG research (p-value=0.000), implying that research supervisors who perceive the PG research service quality to be good will also perceive that the PG research students are satisfied with the overall service. This is in concurrence with the literature and views of other researchers such as Bolton and Drew, 1991 and Patterson and Johnson, 1993, as cited by Cronin and Taylor (1994).

However, contrary to what is espoused in the literature (inter alia, McNabb & Sepic 1995; Zhang 2010), namely, that the process of organizational socialization (OS) results in role learning (RC) and gaining an appreciation of the climate for service (OC) on the part of the individual, no relationships were found between the following variables: OS and RC; RC and PGSQUAL; RC and OC. This can be attributed to various reasons, inter-alia, sample size. Before the non-existence of any relationship can be generalized, more research needs to be conducted, using a larger sample.

## **Conclusion, Limitations and Recommendations**

Given the significant findings reported above, it is important for higher education institutions, especially the units responsible for PG research, to ensure that a 'climate' conducive to research is fostered and that all contact personnel are appropriately socialized.

A major limitation in the current study is the sample size. Since the sample size is of extreme importance to statistical tests and model fitting, confirmation or otherwise of the findings could be determined by undertaking a similar research among a larger sample across several similar higher

education institutions. Another limitation of the study is the effect of confounding or suppressor variables in the fitted model, since not all the hypothesized relationships were found to be significant, this also alludes to the fitting of different statistical models to the data to examine the effect of all of the variables for future research.

In this study, the PG research supervisors' perception of the research quality was determined. This may be both a shortcoming as well as a contribution in that some researchers, inter-alia, Berry, Parasuraman and Zeithaml (1990) assert that 'consumers are the sole judge of quality.' Nevertheless, future studies could compare the PG students' perception of the research service quality with the PG research supervisors' perception of the organizational climate, their role and level of organizational socialization.

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Krishna K Govender  
School of Management, IT and Governance  
University of KwaZulu-Natal  
Pietermaritzburg  
South Africa  
govenderkr@ukzn.ac.za

Shaun Ramroop  
Department of Statistics and Biometry  
University of KwaZulu-Natal  
Pietermaritzburg  
South Africa  
RamroopS@ukzn.ac.za