The Performativity of IS implementation outcomes: the case of an Enterprise System Implementation at Ìwádí University

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Abstract

IS implementation failure is high, yet uptake of these systems is still on the rise. This inconsistency might be because of the rational and narrative approach which characterizes how IS implementation success and failure are currently assessed and defined in research. This study challenges these dominant approaches (rational and narrative) which views outcomes as static and fixed by adopting a performative view. Hence the question: How are the realities of IS Implementation outcomes performed? This study adopted a case study methodology and used Actor Network Theory (ANT) in reconstructing the implementation story and producing knowledge claims. Findings indicate that the realities of IS implementation outcomes are performed by and within the groups in which the IS implementation is assessed. In this study, the IS implementation was assessed in two different groups and performed concurrent competing realities of IS implementation outcomes. This study elicits how factors such as expectation management, organizational politics, market recognition and the conditions of possibility played a key role in the intra-actions that enacted the realities of IS implementation outcomes. These factors were not pre-given rather they were locally produced within the IS implementation actor network.

Keywords: IS implementation success and failure, Actor Network Theory (ANT)

1. Introduction

The extant landscape of research on the outcomes of information systems development and implementation suggests that this domain has been extensively researched (Doherty et al., 2012). Results indicate high information systems (IS) implementation failure, yet uptake of these systems is still on the rise (Mahmud et al., 2017). In response to the alarming failure rates, researchers and practitioners have extensively researched the concept of IS success and failure prescribing and promoting a cumulative list of critical success factors which they believe should improve the success (Jewer & Compeau, 2021). This effort, however, has not yielded much improvement considering the vast amount of research in this domain (Baghizadeh et al., 2020). This inconsistency might be as a result of the rational and narrative approach which characterizes how IS implementation success and failure are currently assessed, defined and framed in research (Mpazanje et al., 2013).

The dominant rational approach (scientific realism) presents IS implementation success and failure as static, discrete, determinate, and time resistant despite the uncertainty and unpredictability involved (Cecez-Kecmanovic et al., 2014). It has been criticized for being simplistic in its representation of success, and by implication failure, in IS implementation (Cecez-Kecmanovic et al., 2014). The narrative approach presents IS implementation success and failure as being created through subjective interpretation, narratives and social construction (Bartis & Mitev, 2008; Walsham, 1999). Given the multifaceted nature of IS, this approach argues that the success and failure of an IS implementation cannot be objectively determined as different social groups attribute different understanding and meaning to the concepts of IS implementation success and failure (Bartis & Mitev, 2008). Both the rational and narrative approach have taken a representational view where certain key elements are used

to represent the important aspects and characteristics of IS implementation outcomes. It is assumed that surrogates related to measures and perceptions can be used to operationalize success and failure.

This representational view which characterizes much of research in IS (Grover & Lyytinen, 2015) means success is either represented by objective measures or by subjective perceptions of social actors. The problem with this representational view is that: (1) IS success and failure is reified as given, fixed and time resistant, (2) it encourages the importation of incomprehensive models as readymade products that can be used out of the box to determine success or failure (Sadoughi et al., 2013) (3) The information technology (IT) system in focus is often black-boxed and downplayed. With the IT system being exogenous to theorizing in IS research, there is a scarcity of innovative theorizing, hence, an increase in the number of incommensurate mid-level models or frameworks that produce confounding results (Grover & Lyytinen, 2015).

We, therefore, challenge the dominant representational view of IS assessment which views outcomes as static and fixed by adopting a performative view in which the outcomes of an IS implementation is fundamentally indeterminate, which then becomes temporally determinate by observing related actors and their dynamic intra-acting within emerging actor networks from which properties, boundaries and concepts emerge and makes sense (Cecez-Kecmanovic et al., 2014). Reality is enacted; hence, it is not static and singular, instead, dynamic and plural. This outlook does not imply multiple views to one true reality, rather multiple realities in which truth is no longer the only criteria for validating and disproving reality (Law, 2004). Thus, the possibility exists of multiple concurrent realities of success and failure as outcomes of an IS implementation. Yet, it is not clear how the realities of implementation outcomes are performed. By providing understanding of this phenomenon, this study contributes to the ongoing theorizing of IS implementation outcomes. In addition, organisations can understand what actions/activities to adopt or avoid in relation to the performativity of implementation outcomes. Based on this background, this study, sets out to answer the research question: How are the realities of IS implementation outcomes performed? In this introduction we have reviewed literature on IS implementation outcomes which we find limited. The rest of the paper contains related literature on Actor Network Theory (ANT) concepts, the research method, the IS implementation case study, ANT analysis, discussion, and conclusion.

2. ANT- Overview of Important Concepts

An anti-representational account of reality is performative (Barad, 2003). Performativity posits that the relation and boundaries between the social and material are enacted in practice rather than given (Jones, 2014). This study adopts ANT as its theoretical lens because like the performative perspective, ANT views all actors alike (humans and non-humans), zooms out on them and zooms in on their relationships which produce actions and events from which realities of success and failures are enacted (Jrad & Sundaram, 2016). This turn towards performativity has odd consequences, in that, things referred to as singular, in theory, exist as multiples in practices. Each practice enacts a different reality which rarely momentarily collapses into a single reality. Although it seems counter-intuitive, a completed translation does not create a single consistent configured network or reality, rather a multiplicity of realities emerge (Mol, 2002). In this section, we now explain the relevant ANT vocabulary and analytical concepts.

2.1 Actor/Network
An actor is not the sole performer of action; instead, it is the target of a substantial collection of entities grouping towards it (Latour, 2005). An actor is the outcome of a relational configuration. It does not exist outside the relation or network that defines it. A network in ANT sense should not be confused with a telephone or subway network. Far from it, the network in question is an expression, a notion and

not a thing. It is not what is being described but, a tool that assists in describing things (Latour, 2005). It ensures the analysis of different patterns of connections.

2.2 Translation

Translation is a process of aligning, shifting and making equivalent (Law, 2009). The process of translation consists of the following steps labelled as problematization, interessement and enrolment which can overlap in reality (Callon, 1986).The first moment during translation is problematization, during which one or more key, primary or focal actors "determine a set of actors and define their identities in such a way as to establish themselves as an obligatory passage point in the network of relationships they are building" (Callon, 1986 p.6). Interessement is the second moment of translation. Prior to it, problematization is still hypothetical. Hence, at this moment, the focal actor tries to negotiate, impose and stabilise the identity or roles of actors to that defined at the moment of problematization (Callon, 1986). A successful interessement confirms problematization and leads to enrolment. Enrolment is the third moment of translation during which other actors accept the roles or identities defined for them by the focal actor (Callon, 1986). The translation process creates an actor network from which groups emerge. Groups are meaningless and only understood by studying their formation (Latour, 2005). The starting point for an ANT analysis is not to find which groups make up the social rather; it commences by discovering what group actors belong to by following them via the traces that were left behind by their activity of assembling and dissembling groups (Latour, 2005).

3. Method

This study aims to make sense and provide the understanding on how success or failure comes about in an IS implementation. Given the aim of this study, a case study research method was chosen. The case study method is appropriate for implementation studies because they are characterized by dynamic processes that are best investigated in their natural setting (Venugopal & Rao, 2011). In selecting the single case, the following aspects were considered; the number of cases to be selected, the unit of analysis, longitudinal or retrospective case(s), and the case selection criteria. Two possible cases were reviewed based on their recent implementation endeavor. The first involved the implementation of an enterprise system (ES) research information management system (RIMS) while the second involved the implementation of a customer relationship management system (CRM) both in a large higher education institution (HEI) in South Africa which we will anonymise as Ìwádí. The first case was selected because it was a retrospective case which was accessible by the researcher.

3.1 Data Collection and Analysis

Data was collected through semi-structured interviews, observations, documents, and field notes. A total of 33 interviews were conducted and 27 documents were collected. The interviewees included members of the implementation team, the publication management team, faculty coordinators, departmental administrator, and a research manager from a different HEI. The use of field notes corroborated the observations as it involved taking a continuous commentary on activities, actions, and events in a case study. From December 2018 to June 2019, the researcher spent at least three Fridays every month at Ìwádí and from July 2019 to October 2019 the researcher visited the research site at least two times a month.

The research questions were constructed based on the concepts of translation, materiality, relationality, performativity, and practice. All the main interviews, follow-up interviews and impromptu conversations were conducted in the offices of the research participants, so this gave the researcher an opportunity to observe participants in their natural environment.

In analysing the collected data, this study used an ANT analysis strategy. The ANT analysis began during the data collection process. At this step, the researcher continuously read, annotated, and inductively coded the interview transcripts, observational notes and other secondary data sources, from which anecdotes or textual accounts began to emerge. Then, using ANT's concept of translation, the researcher analysed the collected data and pieced together (enacted) the sequence of events during the pre-implementation, the implementation and post-implementation stages of the RIMS system. The number of events generated were enormous and the researcher had to focus the analysis by identifying and making sense of key events that were relevant to the RIMS implementation outcomes. The researcher then translated the result of the analysis into descriptive textual accounts.

3.2 Ìwádí University and the Publication Count Process

In 2014, Ìwádí declared a new ten-year strategy (2015-2025) to become a research-intensive university, and it acknowledged the need for excellent IT resources and support to achieve its goal. At Ìwádí, there was a plethora of disjointed research systems and processes which created an environment where supporting research was challenging. To resolve this problem, a consultant architect was employed by the research office. The research office was responsible for research affairs. The consultant architect initially focused on the publication count process. The consultant architect identified quick wins for this process because it was a mature process that affected several organisational units within the university's research enterprise. Furthermore, it was an important process because Ìwádí depended significantly on the subsidy received from the Department of Higher Education and Training (DHET) for financing and supporting research.

The publication count process commonly referred to as pubcount in Ìwádí is an annual research support activity conducted in public higher education institutions (HEIs) in South Africa. It involves HEIs submitting research publications affiliated to their institutions to the DHET for research subsidy. The pubcount process included five stages namely: sourcing, verification, validation, auditing and screening, and submission. At the sourcing stage, the researchers submitted their research articles to their departmental administrators who manually captured them into the legacy RIMS called Óparí. Next, departmental administrators verified that the submitted publications met the pubcount criteria specified in the DHET research output policy. They then submitted each publication electronically (metadata) and in full text (hard copy) to their respective faculty coordinators. At the second level of verification, the faculty coordinators verified the submitted hard copies against the electronic metadata of the published articles. They then submitted all the verified publications for validation. Once the publication management team completed validation, they prepared the DHET report which was audited by external auditors before submission to the DHET for subsidy. To improve the pubcount process, the consultant architect designed a research administration digitisation (RAD) program. The RAD program consisted of several projects and implementing a new RIMS for the pubcount process was a key project.

4. ANT Analysis

The translation process consisted of three moments, namely problematization, interessement and enrolment. The researcher followed the focal actors through these moments.

4.1 Problematization

The interest of the research office was to implement a RIMS that could support research administration at Ìwádí. The realisation that Óparí was not going to support the Ìwádí's new strategy made it easy for the consultant architect to engage the research office into the idea of implementing a new RIMS that could support the pubcount process and other research administration processes within the university. The research office appointed the consultant architect as the program manager. The program manager inherited the interest of the research office. With the mantle of this new position, the program manager

took on the responsibility of identifying and engaging key actors and thus assumed the role of the focal actor.

The program manager (ex-consultant architect) commenced with engaging a few external consultants to make up the initial members of the RAD implementation team. Next, the program manager made attempts to engage other key actors such as the RIMS vendor, the RIMS, the publication management team, the faculty coordinators, and the departmental administrators. The next step of problematization was to define the obligatory passage point (OPP). The OPP is an event that needed to occur for all actors to realise their interests, as defined by the focal actor (Callon, 1986). The program manager put forward the RAD program as the OPP. This decision meant that the RAD program, more specifically the implementation of the RIMS for the pubcount process was necessary for the interests of the pubcount stakeholders to be satisfied.

4.2 Interessement

At the second moment of translation, the focal actor deployed strategies and devices to convince other actors to accept the definitions of interests defined for them. The following sections describe the negotiation between the focal actor and other key actors involved in the implementation of the RIMS for the pubcount process.

4.2.1 Negotiation with the RIMS Vendor

The RIMS vendor was an international analytics organisation that created and sold various academic research solutions. It was interested in selling its RIMS and assisted organisations with its implementation and support. As part of the RAD program, the focal actor needed a modern RIMS to replace the outdated Óparí system in administering the pubcount process. To achieve this, the focal actor engaged and negotiated with several RIMS vendors. One of the strategies applied by the focal actor was issuing a request for proposal and inviting RIMS vendors for a demo presentation. This strategy created awareness and showed the focal actor's commitment towards engaging a RIMS Vendor. A RAD implementation team member reported: *There were presentations by vendors, and we did a balance kind of scorecard thing where everything was weighed. There was a shortlist of two, and they decided to go with one.* (**RAD implementation team member 2**)

4.2.2 Negotiation with the RIMS

The RIMS was a configurable and customisable package information system. It was a researcher-centric system that assisted organisations streamline business processes for various administrative functions supporting research. Out of the box, it consisted of several prebuilt sub-systems that are usually configured and customised further by system users to meets the user's requirement. The focal actor needed to engage the RIMS to eliminate administrative burdens by automating the publication administration process. Thus, the focal actor, through the RIMS vendor, negotiated the engagement of the RIMS. For instance, the RIMS required that the focal actor put in place resources such as the servers, operating system (OS), networks, security, and system engineers.

4.2.3 Negotiation with the Project Implementation Committee

The project implementation committee (PIC) was responsible for the overall governance of the RAD implementation program. The PIC represented the university's management in the RAD implementation program. They were primarily concerned with monitoring the progress of the implementation and providing the needed resources. The group consisted of high-level senior management and delegates from different organisational units such as the research office within the university. The PIC had both internal and external interests. Internally, the PIC was interested in ensuring that the implementation was delivered within time, cost, and scope. Externally, the PIC was concerned about how the outcome of the implementation affected the university hence, it was interested in ensuring that the implementation was assessed as a success by other HEIs in South Africa.

4.2.4 Negotiation with the RAD implementation team

The focal actor needed the RAD implementation team to execute implementation tasks such as configuring the RIMS and developing the DHET report for the pubcount process. The focal actor began negotiating with potential members of the RAD implementation team because of their skills, expertise, and experience. To engage these potential members, the focal actor offered temporary employment contracts on the RAD program. The employment contract was an interessement device that provided potential members employment and the possibility for job experience.

4.2.5 Negotiation with the Publication management team

The publication management team administrated and managed the pubcount process using the Óparí System; hence they were the domain experts. The focal actor needed the publication management team to take ownership in the implementation of RIMS. This involved providing business requirements to the implementation team, testing the RIMS, providing feedback to the implementation team, managing the new pubcount process, and training and supporting the end-users of the RIMS. To engage the publication management team, the focal actor got them excited about new features and functionalities offered by the RIMS.

4.2.6 Negotiation with Faculty coordinators

The faculty coordinators were staff or ad-hoc staff of the university responsible for managing the pubcount process at the faculty level of the university. Through the publication management team, the focal actor engaged with the faculty coordinators. The focal actor required the faculty coordinators to use the RIMS to manage the faculty's pubcount process. The focal actor engaged the faculty coordinators by providing system functionalities and features that addressed issues associated with the Óparí system.

4.2.7 Negotiation with Departmental administrators

The departmental administrators are staff or ad-hoc staff within academic departments. They are responsible for sourcing and capturing publications affiliated with their departments on the RIMS. The captured publications are sourced directly from the researchers or external databases. Through the faculty coordinators, the focal actor engaged the departmental administrators. The focal actor aimed to replicate the same role from the Óparí system; hence, the focal actor assigned the departmental coordinator with a publication capturer role on the RIMS. Activities such as publication sourcing and capturing had been defined as part of departmental administrators' job. A RAD implementation team member explained: *And then department admins, faculty coordinators it is just their job, so they have to do it…, I suppose they get deadlines from the research office. (**RAD implementation team member 2**)*

4.3 Enrolment

Enrolment is the third moment of translation. This is the stage where actors accept the roles defined for them by the focal actor (Callon, 1986). The interessement strategies do not automatically lead to enrolment hence at this stage, we unpack the multiple negotiations, obstacles, and concessions that accompany the interessement and caused them to succeed or fail (Callon, 1986).

4.3.1 Enrolment of RIMS Vendor

For the vendor to be enrolled, it must accept the role of providing and implementing the RIMS at Ìwádí university. In other to accept the role of providing the RIMS, the vendor had to respond to the request for proposal and partake in the RAD program system procurement process. The process involved competing with other vendors and showing that the RIMS could meet the requirement of the RAD program. The RIMS acquisition by Ìwádí university in 2015 confirmed the enrolment of the RIMS vendor. This was explained by the RIMS vendor consultant: *The application was acquired by Ìwádí University in 2015, I got involved in March 2016 (**RIMS Vendor consultant**).*

4.3.2 Enrolment of RIMS

For the RIMS to be enrolled, it must accept the role of being the IT system that supports the publication management process at Ìwádí university. That is, it must be installed, integrated, configured, and customized prior to the 2016 pubcount cycle. For the enrolment to be achieved, the focal actor needed to ensure that the IT department of the institution put in place resources such as the servers, operating system (OS), networks, security, and system engineers needed to support the enrolment of the RIMS. The focal actor was unable to meet the operating system requirement of RIMS because the university's IT department who hosted the RIMS did not have system engineers with the technical ability required to install and support the required OS. Despite this challenge, the RIMS confirmed enrolment by being successfully installed on premise on an unsupported OS (Ubuntu).

4.3.3 Enrolment of Project Implementation Committee

For the PIC to be enrolled, it must accept the role of providing the required resources and support needed by the focal to implement the RIMS. The kickoff of the RAD implementation program, the procurement of the RIMS and the employment of members of RAD implementation members are events that confirmed the enrolment of the PIC. The PIC supported the RAD implementation post the 2016 pubcount cycle. This was confirmed by the two years extension granted to the RAD program manager to complete and extend the scope of RAD implementation. This was highlighted by the RAD implementation team member 5: *I was brought on the project when the project was an extension I believe. The project had already taken place two years prior to me arriving here and it was extended for another two years 2018-2019* (**RAD implementation team member 5).**

4.3.4 Enrolment of RAD implementation team

Through the secondment and recruitment process, existing employees of Ìwádí University and external job seekers accepted the role of joining the RAD implementation team. The outcome of the 2016 pubcount count cycle highlighted several issues with the implementation delivery of the RAD implementation team. Issues such as the inability of the RIM's reporting engine to automatically underline authors on the DHET report, the harvesting functionality and data quality issues were pointed out by RIMS users. However, these issues were not showstoppers that could have prevented the completion of the 2016 pubcount cycle because of the workarounds that were put in place. In all, the RAD implementation team were able to implement about 85 percent of the RIMS for the pubcount process. This was highlighted by the RAD project manager: *In the first cycle we made 80 to 85 percent of the requirement. The gaps were underlining names, data quality issues (RAD Project manager)*

4.3.5 Enrolment of Publication management team

Taking up the role to assist the RAD implementation team, was a difficult challenge for the publication management team. This was because of their non-inclusion when making decisions and the presence of functionalities that did not work as expected. Despite the challenges which weakened the enrolment efforts of the focal actor and the RAD implementation team, we see that the publication management team was enrolled. They completed the 2016 pubcount cycle using the RIMS. They acknowledged that the system had the basics required to support the 2016 pubcount cycle. However, they considered the 2016 cycle a failure because they had to apply so many workarounds to make it a success. This was explained by Publication management team member 5: *we have had to manipulate and change a lot to call it a success. I think the editing has to be minimized a lot more before we can call it a success. We make it a success because we have to, we go through the records and it ended up being very manual and we make things add up* (**Publication management team member 5)**

4.3.6 Enrolment of Faculty coordinators

The faculty coordinators faced several challenges in taking up the role defined for them by the focal actor. These included: the amount of effort required to participate in the pubcount process even though it was not part of their core responsibilities; lack of proper training on the RIMS and their non-inclusion in the core focus group that implemented the RIMS. Despite the challenges faced by the faculty

coordinators, they accepted the role and were enrolled by the focal actor and the publication management team prior to the 2016 pub count cycle. The faculty coordinators used the RIMS to manage the faculty's pubcount process because it was part of their job responsibilities. They experienced a lot of teething problem while using the RIMS to manage the faculty pubcount process. This was highlighted by Faculty coordinator 2: *It was a nightmare, it was difficult….there are initial teething problems with any new system, and I have dealt with new systems before but this one was different because there was no support. Because even the support did not know* (**Faculty coordinator 2**).

4.3.7 Enrolment of Departmental administrators

The faculty coordinators assisted the focal actor with the enrollment efforts. In negotiating to accept the role of publication capturer, the departmental administrators faced challenges such as the harvesting functionality not working as expected and negative comments about the RIMS from the publication management team. Nonetheless, the departmental administrators used the RIMS to capture publications for the 2016 pubcount cycle because it was part of their job responsibilities.

5. Discussion – Performativity of the RIMS implementation Outcomes

At the beginning of the 2016 pubcount cycle there was one large RIMS implementation actor network that consisted of enrolled actors. The intra-actions within this actor network created groups. Groups are formed by the identification of anti-groups (Latour, 2005). That is, groups are formed by actors identifying the alternative groups they do not belong to. In this case, the RIMS end user group was formed by members of the publication management team who represented RIMS users. They made comments concerning how they were not involved in the decision-making process during the implementation of the RIMS: "*It was very challenging and not only because with every new system you expect teething problems but because of how decisions seemed to have been changed and we were not informed… I can't even talk to procurement because we were never involved*" (**Publication management team member 1**). This comment did not only reflect the absence of RIMS end users' group from the decision-making process, it also highlights the presence of an alternative group (RIMS implementation group) which made the decision concerning the implementation of the RIMS. This was highlighted by a member of the RAD implementation team: "*I think that we should have included the administrators especially the publication management team, we should have included them more in what we were doing but the again we just never had time to do that.* The intra-actions within these groups gave rise to agencies which enacted the RIMS as an object of assessment as well as their assessments of its implementation. These agencies are referred to as agencies of assessment. "An agency of assessment is a specific kind of agency that arises through intra-actions and shows up in the resulting sociomaterial practice that enacts a particular assessment together with the object of assessment" (Cecez-Kecmanovic et al., 2014 p.22)

The RIMS end user group consisted of actors such as the RIMS, the departmental coordinators, the faculty coordinators, the publication management team, and the job responsibility document. These actors belong to the RIMS end user group because they use the RIMS for the pubcount process, and they were not involved in the decision-making process. As soon as the 2016 pubcount cycle started, several challenges emerged within the RIMS end user group. The departmental administrators and the faculty coordinators mentioned that they experienced key problems such as bad HR data and the non-usability of the harvesting feature while sourcing, capturing, and verifying publications on RIMS. The HR data integration and publication harvesting were key feature that was used by the focal actor in getting end users interested in the system. These features were supposed to revolutionize the way end users capture publications, but they did not work as expected and it was a major disappointment. This outcome highlights an opportunity where continued expectation management by the focal actor would have assisted in mitigating the negative consequence. IS implementation outcomes are not really a

function of right or wrong but rather good or bad and on this continuum, expectation plays a key role (Neves et al., 2016). The impact of these challenges was felt by the publication management team (the spokesperson of the RIMS end user group) as they had to do a lot of workarounds (manual corrections due to dirty HR data and manual capturing errors) to validate and prepare the pubcount report for the DHET. The RIMS end group had to manipulate and manually change things on the RIMS to ensure that the RIMS implementation was assessed as a success. However, within the RIMS end user group, the RIMS implementation (object of assessment) was enacted as an implementation with too many workarounds (sociomaterial practice) and was considered a failure (assessment outcome) because the features promised by the focal actor did not work as expected (assessment criteria). As a result, there were calls by actors within the RIMS end user group for a return to Ópárí. This however was not realized because the job responsibility document mandated that end users use the RIMS for pubcount. In an ANT study, an action is not performed under the full control of consciousness of the actor as there are several other forces not of the making of the actor that are at play when it acts (Latour, 2005). There are agencies (in this case, the agency of the job responsibility document) which actors have no control over that makes them do and not do things. The performativity of the failed implementation outcome at this point (end of the 2016 pubcount cycle) is not the end state of the RIMS implementation outcome within the RIMS end user group. A failed implementation outcome at this stage is typical, particularly because of the inflated expectations focal actors use in interesting end users. Sarker et al. (2006) highlights how a business process change failed because of a failed enrolment. However, we see that even a successful enrolment does not guarantee a successful outcome. Members of the RIMS end user group were enrolled to the implementation actor network, yet they considered the implementation a failure.

The RIMS implementation group consisted of actors such as the RIMS, the publication management team, the RAD Implementation team, the PIC, and the RIMS implementation status report. These actors belong to the RIMS implementation group because they played a major part in making decisions and implementing the RIMS for pubcount. Members of the RIMS implementation group had an implementation status meeting quarterly (sociomaterial practice) through which the agency of assessment arose and the assessment criteria defined. The RIMS implementation group expected a quality RIMS to be delivered on time and within budget (as highlighted in the implementation status meeting minutes and by the program manager). Prior to go-live, the focal actor faced a dilemma due to RIMS implementation issues. This meant postponing go-live for a year to fix the issues or go-live with the system as-is and put in place workarounds. Malaurent and Avison (2015) showed that workarounds can be an effective tool to turn around a failing implementation. The first option (postponing go-live) created the problem of the implementation going overtime and over budget because two systems will run in parallel (RIMS and Ópárí). As a result, the focal actor decided to go live as-is without consulting the RIMS end user group. By making this choice, the focal actor tried to ensure the success of the RIMS implementation by favoring the PIC at the cost of disappointing and overworking the RIMS end users with workarounds. The choice to side with the PIC highlights the application of organisations politics by the focal actor. Given the lack of financial resources and time, the alternative (postponing go-live) was politically risky and untenable. That is, financial resources and time were necessary conditions for the selection of the alternative to be possible (conditions of possibility). Organisation politics have been emphasized as a tool that can positively influence implementation outcomes (Neves et al., 2016).

At the end of the 2016 pubcount cycle, the focal actor confirmed that the RAD implementation team had completed 80-85% of the RIMS implementation for the pubcount process. The pubcount process was done by most public HEIs in South Africa, hence they were aware of the of the RIMS implementation at Ìwádí and as such, two HEIs commenced implementing RIMS for their pubcount process. One of the HEIs is the biggest in the country in terms of research output production. The research manager at the other HEI and the vendor consultant confirmed that the RIMS implementation at Ìwádí generated adoption interests of the RIMS among other HEIs in the country. Furthermore, the RIMS implementation status report to the university's Senate and Council highlighted the RIMS

implementation group position on the outcome of the RIMS implementation. The RIMS implementation group reported the success (assessment outcome) of the RIMS implementation (object of assessment) as they were able to successfully use the RIMS to prepare and submit the 2016 pubcount report to the DHET based on which research output subsidy was awarded to the university (assessment criteria). They linked the increased adoption of the RIMS at other HEIs in the country to the success of their implementation (assessment criteria). Market recognition is an important determinant of a successful implementation outcome (Neves et al., 2016). They acknowledged that the implementation was not trouble free and that the learnings and experience of the first year are being used to improve the effectiveness and ease-of-use of the RIMS for next cycle. The success of the RIMS implementation at the end 2016 pubcount cycle was confirmed by the PIC's extension of the implementation by two years to increase its scope.

6. Conclusion

In this article, we have asked the question: How are the realities of IS implementation outcomes performed? To answer, we adopted the ANT as a theoretical lens to investigate the concept of IS implementation outcomes from a performative perspective. Our findings indicate that realities of IS implementation outcomes are performed locally. That is, they are performed by and within the groups in which the RIMS implementation was assessed(Cecez-Kecmanovic et al., 2014). In this case, we observed that the RIMS implementation was assessed in two different groups (smaller actor networks) which performed concurrent competing realities of the IS implementation outcomes. This study offers contributions both on the theoretical and on the practical level. Theoretically, it contributes to the ongoing theorizing of the assessment of IS implementation outcomes by challenging the existing representational approaches and using the ANT to provide a performative perspective to this phenomenon. Regarding the practical contributions, it sensitizes scholars and practitioners towards the limitation of existing approaches that put forward a singular reality of IS implementation outcomes as given. Such a position blinds us to the possibilities of multiple implementation outcomes being enacted or we conflate multiple realities of IS implementation outcomes into a single reality even though they do not complement. This mis-framing makes a case against the way we currently assess IS implementation outcomes and sheds light into inconsistencies we see between research and practice. Furthermore, this study elicits how factors such as expectation management, organizational politics, market recognition and the conditions of possibility played a key role in the intra-actions that enacted the realities of IS implementation outcomes. These factors were not pre-given rather they were locally produced within the RIMS implementation actor network. Practitioners need to be sensitive to the time and place where these factors are produced and use them to influence desired outcomes. Finally, this study was conducted within a large organization with a large implementation actor network. This context was a condition of possibility that allowed complex intra-actions that enacted multiple realities of IS implementation outcomes. It is unclear whether same findings will hold within a small organization with a small implementation actor network. Future study we argue should scrutinize this outcome and validate its relevance to a small organization context.

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