

Factors Affecting the Effectiveness of Recognizing Prior Learning Model of Vocational Training in Sri Lanka – a Literature Review

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Abstract

There is strong evidence for the collective nature of workplace learning model. Which is commonly known as the Recognition of Prior Learning (RPL) Model. In current context of Sri Lanka's Vocational Training (VT). Data shows that as many as forty-four percent (44%) of school leavers in Sri Lanka join the job market as unskilled workers without proper training or an induction. This highlights the importance of VT in socio economic development of Sri Lanka (SL). Scholars argue that VT is practical & work based, in contrast to school and university education. The RPL model requires training and assessment processes that are fair, transparent, and consistent to ensure that the skills and knowledge of the individuals are recognized appropriately. RPL Model strategies can further be divided into two categories: (1) strategies that focus on completing certain work-related tasks and (2) strategies that focus more comprehensively on the learning process itself. The review suggests that there may be a need to improve the quality of the training and assessment processes in Sri Lanka to enhance the effectiveness of the RPL model. This review suggests that the effectiveness of the RPL model in SL is influenced by a complex set of factors. Addressing these factors requires a collaborative effort from various stakeholders. Researcher believes that further research is needed to better understand these factors and how they can be addressed to improve the effectiveness of the RPL model in Sri Lanka. The specific procedure used in this review was literature screening and review related to vocational training and workplace learning. The main review type for this study is a mapping review.

Keywords: Effectiveness, RPL Model, Vocational Training, Sri Lanka

Introduction

This research paper summarizes the previous research studies into the topic of Factors Affecting the Effectiveness of Vocational Training. In an ideal situation, all craft related trade workers with relevant and sufficient prior work experience should have had the opportunity of obtaining the National Vocational Qualification – NVQ without any hindrance. In order to understand the factors affecting the effectiveness of Vocational Training, researchers believe that we need critical understandings of how vocational training is supporting individuals, communities, firms and the larger society. As this research topic is closely connected to the no of government institutions and has direct interaction and impact on the general public in many ways; it is essential to consider various periodical statistics and other reports published by the relevant government and non-governmental donor agencies. Thus, the literature review included considerable number of publications including annual reports and periodicals related to the topic. Researchers such as Mujumdar (2007); Boldwin et al. (1988); Goldstain et al. (2002); Melissa (2000); Boström, B. (2017); Gamble (2004); Charles (1978); Stevens (1999); Fjellström et al., (2016); Patton (2014) & Lucas (2015) have discussed the topic of vocational training and its effectiveness in different circumstances compared to this research topic. As this research paper discusses the factors affecting effectiveness of the Recognition of Prior Learning (RPL) model. Aarkrog (2005) stated that the (RPL) is a vocational training model designed to assess and recognize an individual's prior learning and experience, and provide them with appropriate recognition and certification. Abeyratne et al. (1993) pointed that the effectiveness of RPL models in Sri Lanka can be influenced by various factors. Thus, this Literature review looks at the past literature in to the topic.

Objectives of the Paper

This review focuses on three main objectives as mentioned bellow:

1. To identify the key literature in to the topic of effectiveness of the Recognition of Prior Learning (RPL) model of Sri Lanka's Vocational Training.
2. To assess the effectiveness of the assessment and validation methods used within the VT especially RPL Model.
3. Through Literature, to identify best practices and lessons learned from other countries' experiences with RPL models in vocational training.

Key Studies on Vocational Training – Selection of Literature from Past Studies

Table 1: Summary of the previous academic research studies carried into the topic

Key factors reviewed related to the topic	Source of Literature
<ul style="list-style-type: none">▪ Workplace based learning & recognition of prior work experience,▪ Trainer and trainee working together,▪ Relationship factor involving trainees in a work-based learning environment.	Evanciew et al. (1999); Filliettaz (2011); Koskela et al. (2011); Onnismaa (2008); Tanggaard (2005); Ekenayayake (2014); Emrey (1999); Edirisignhe (2014)

<ul style="list-style-type: none"> ▪ On the job explanations - providing information, ▪ Categorisation, ▪ Transferring tacit knowledge from trainer to the trainee 	Collin et al. (2005); Evanciew et al. (1999); Koskela et al. (2011); Onnismaa (2008); Tanggaard (2005); Evanciew et al. (1999); Filliettaz (2011); Nielsen (2008); Tanggaard (2005); Stephanie (2012)
<ul style="list-style-type: none"> ▪ On the job reflection – conversations & discussions with the trainee & giving feedback 	Filliettaz (2011); Smith (2000); Wegener (2014); Winters et al. (2009); Virtanen and Tynjälä (2008)
<ul style="list-style-type: none"> ▪ Observation and demonstrations by the trainer/ instructor in the vocational training & workplace learning - RPL Model 	Evanciew et al. (1999); Smith (2000); Tanggaard (2005); Stephen (2006); Lucas (2012); Stephen (2009); Lucas (2015)
<ul style="list-style-type: none"> ▪ Independent work and experimentation by the apprentice/trainee during the training 	Evanciew et al. (1999); Reegård (2015); Smith (2000); Mujumdar (2012); Agrawal (2013)
<ul style="list-style-type: none"> ▪ All employees / entire workforce as a team including designated trainers; fellow workers and employers & other interacting parties involved 	Chan (2014); Collin et al. (2005); Corney and du Plessis (2010); Evanciew et al. (1999); Gurtner et al. (2011); Onnismaa (2008); Reegård (2015); Smith (2000); Tanggaard (2005); Wegener (2014)
<ul style="list-style-type: none"> ▪ Influence of the peers of the trainee in the workplace learning 	Corney et al. (2010); Filliettaz (2011); Fuller et al. (2004); Gurtner et al. (2011); Nielsen (2008); Smith (2000); Tanggaard (2005); Hettiarachchi (2014); Emery (1999)
<ul style="list-style-type: none"> ▪ Trainers certified & nominated by the authority 	Corney et al. (2010); Wegener (2014); Winters et al. (2009); Virtanen et al. (2008); Virtanen et al. (2014)

Source: Author's own creation

Literature review into empirical research into the topic of factors affecting effectiveness of Vocational Training reveals that there is a dearth in academic studies into the topic. Except for random and periodical course evaluation, no one has looked at the Recognition of Prior Learning Model.

Sri Lanka's Vocational Training system has evolved over the years mainly to fulfil the economic and political agenda. For example, Deloitte (2019) stated that the Vocational Education in Sri Lanka commenced with establishment of the Government Technical College by the British rulers of Sri Lanka in 1893 in Maradana. At that time the primary objective was to train the blue colour personnel to run the railway and tea industry. However, since the opening of the economy in the year 1978, open market economic policies of successive governments have prompted more multinational companies shifting their operating facilities to Sri Lanka. Although their primary objective was to serve the local market, over a period of time they have grown even to serve the international market. This resulted in a sudden growth in the industry & service sector in the country. Review shows in countries where there is an advance VT system such as Australia, under TAF – Training Australia First, state industrial zones would have vocational training canter established attached to the industrial zone where the factories

are located. This review shows that workplace learning can be enhanced by factors such as job autonomy, supportive management, opportunities for reflection, and collaboration with colleagues. At the same time, "Recognition of prior learning: A review of the literature" by Joy Higgs, Maree O'Keefe, and Ann Ryan (2001) examined research studies on RPL models in vocational training and identified the key factors that contribute to successful RPL programs. They found that successful RPL programs involve clear communication with learners, a focus on learners' prior experiences and knowledge, and the use of appropriate assessment methods. Another significant study by the title "The role of the workplace supervisor in supporting vocational education and training" by Anne McKeown and Stephen Billett (2011): explored the role of workplace supervisors in supporting vocational education and training. The study found that effective workplace supervisors are able to provide learners with opportunities for guided practice, feedback, and reflection. This is very important as unlike in any other study the focus of this study trainer or the senior employees in the workplace. In a similar study carried in the United Kingdom, "The impact of work-based learning on workforce development: Lessons from the UK's Sector Skills Councils" by Alison Fuller, Lorna Unwin, and David Ashton (2009): This study analysed the impact of work-based learning on workforce development in the UK's Sector Skills Councils. The study found that work-based learning can help to develop the skills and knowledge needed for effective performance in the workplace.

Literature review shows that for thousands of years, students have been trained in certain vocations; which is different from what we think of today as vocational training. In a research study titled "Improving the quality of vocational education and training in developing countries" by Simon McGrath and Qian Tang (2013) analyses the challenges faced by developing countries in providing high-quality vocational education and training (VET) programs, and proposes strategies for improving the quality of VET. The study found that improving the quality of VET requires a focus on teacher training, curriculum development, and industry engagement. Stan et. al. (2014) observed that VET programs are effective in providing graduates with the skills and knowledge needed to succeed in the labour market. This study carried in to the title of "The effectiveness of vocational education and training in the Netherlands". This study examines the effectiveness of VET programs in the Netherlands in terms of the labour market outcomes of VET graduates. Brian C. Smith, Keith A. Nitta, and Michael J. Horman (2012) stated that the factors that influence completion rates in apprenticeship programs in the construction trades such as job satisfaction, perceived career opportunities, and mentoring can all have a positive impact on completion rates. In a similar study in to the topic of "Evaluation of the impact of vocational education and training on the labour market trajectories of young people" by Erica Smith and Justin Brown (2018) evaluates the impact of VET on the labour market trajectories of young people in Australia. The study found that completing a VET qualification can improve young people's employment prospects and earnings potential. Literature review shows that even highly specialized business schools, technical schools, community colleges, continuing education colleges, vocational universities and technical colleges which are formerly known as polytechnics have started more research and development in the area of VT. In the recent past, especially during the COVID 19 pandemic lockdown period, online vocational education has become more and more popular, making it easier than ever before for students to learn various crafts and soft skills from mature professionals, even those who may be far away from traditional vocational schools. According to the

Ministry of Skills Development (MOSD) Sri Lanka, the country's technical and vocational education and training (TVET) system has a long history and has evolved over a period of 100 years. For example, Sri Lanka officially recorded its technical education in the year 1893 with the establishment of the very first technical training institute in Maradana, Colombo District. It is now estimated that there are over 5,000 vocational training institutes across Sri Lanka. These include government, private and non-governmental organizations. It is important to note even today; the government plays a key role in VT sector through a number of government institutions – namely, Department of Technical Education and Training (DTET) under the Ministry of Vocational and Technical Training (MVTT); the National Apprentice and Industrial Training Authority (NAITA); and the Vocational Training Authority (VTA). This research narrowly focuses on the Recognition of Prior Learning RPL Model operated through the VTA. As per the Tertiary and Vocational Education Commission, it is estimated that approximately sixty-five thousand 65,000. Students are trained annually through their training centres situated around the country. According to a labour force survey the country has 1,307,767 Craft and related Trade workers and 1,375,540 Skilled Agricultural, Forestry and Fishery workers of whom only about 20 % has skilled certification.

RPL - Recognition of Prior Learning Model

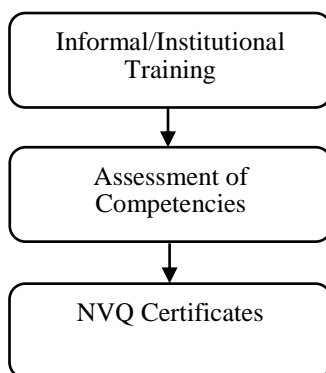
The Recognition of Prior Learning (RPL) program can help an individual to obtain formal qualifications appropriate to their knowledge and skills, thereby enhancing their employability, mobility, lifelong learning, social inclusion, and self-esteem. This increases chances of integrating skilled labour into the job market. This is a win-win situation for all the stakeholders; employers have an opportunity of hiring and making use of skilled workers' who have recognized certificates and better coordinate them with suitable jobs while increasing productivity. According to a special circular issued by TVEC SL (NVQ Circular 02/2021); the NVQ framework of Sri Lanka has provisions to award NVQ Level 1 to 4 craft level certificates through RPL Model. As learning gained through formal & informal methods; informal methods are being increasingly recognized around the globe. Researcher believes that this highlights the relevance of the RPL model in today's socio- economic situation around the globe. Many countries including Sri Lanka have tried to establish RPL systems with the support of global agencies such as the International Labour Organization. Pithers (2017) stated that the implementation of the RPL process into vocational education and training courses has been seen to offer many advantages for the society such as overcoming common problems faced by the working population. For example, many people face significant disadvantages in finding decent jobs, relocating to other areas, and receiving further education, even though they may have the necessary skills and competencies mainly due to lack of certification/credentials from the authorities. TVEC stated that RPL qualification is fundamental to developing a post-compulsory education for those who leave the school education system in Sri Lanka. The RPL model is also applicable to higher education world-wide. This takes place as transfer of credits obtained in other programs, the specific program (certificate, diploma or degree) is evaluated to determine the degree to which it corresponds to the performance level specified in the corresponding national qualification standards. In this case, RPL is used to assess

previously acquired knowledge and skills to fill in the gaps in the prerequisites of the course.

Award of National Vocational Qualification (NVQ) Recognition of Prior Learning (RPL) Certificate in Sri Lanka

According to the current system, the Tertiary and vocational Education Commission TVEC is empowered by the government Act No. 20 of 1990 to issue NVQ certificates. The Vocational Training Authority VTA act as the main training arm of vocational education and training; along with NAITA it represents the government. Under the RPL model in Sri Lanka, The NVQ framework provides persons to acquire certificates through recognizing competencies acquired through informal non - institutional means. The process of Sri Lankan RPL model is shown in figure below:

Figure 1: RPL System in Sri Lanka



Source: Author’s compilation

As shown above, RPL Model is an evaluation process in which a person’s abilities acquired through informal, non-institutional learning are evaluated to determine the degree to which the person has achieved the required abilities according to relevant national skill standards that lead to qualification for the NVQ framework.

Table 2: Work/industry experience required for NVQ certification through RPL system in Sri Lanka

#	Employment category	Experience requirement
1	Own account workers in all occupations in informal sector ("own account workers" mean self-employed persons without business	Service certificate from Grama Niladari for 1 ½ years of work experience

	registration certificate)	
2	Workers employed in formal sector in all occupations	Service certificate from employers for 1 ½ years of work experience
3	Self-employed persons with a business registration certificate	Business registration certificate with 1 ½ years of own experience of work engagement. (Business owners or entrepreneurs who only own the business but not perform in the occupation are not eligible to apply in this category)

Source: NVQ Circular 02/2021 by Tertiary and Vocational Education Commission

Measuring of Effectiveness

Measuring the effectiveness requires an understanding of the factors that affect the effectiveness. Dean (2000) stated that training is linked to factors closely associated to performance. In this case, researchers' considering the research objectives, following factors identified as measuring points of this research topic.

- a. Relationship of involving parties; especially trainer trainee relationship, in the workplace,
- b. Interacting process between involving parties,
- c. Atmosphere in which the interaction takes place &
- d. Environment in which the interaction takes place.

Literature review shows that there are six main categories the effectiveness can be measured;

Awareness and Understanding: To ensure the success of RPL programs, it is important that potential candidates, employers, and training providers are aware of and understand the benefits of the RPL model. Lack of understanding can lead to low participation rates and incorrect applications, which can limit the effectiveness of the model. To increase awareness, targeted marketing campaigns, and informative workshops can be organized to educate stakeholders about RPL.

Availability of RPL Programmes: The availability and accessibility of RPL programs are critical to their effectiveness. Limited access to programs or lack of flexibility in terms of scheduling and location can prevent individuals from participating, especially those in rural areas. To address this, RPL programs should be made available in more locations, and the scheduling should be flexible to accommodate different needs.

Quality of Assessors: The quality and expertise of RPL assessors can significantly affect the validity and reliability of the assessment process. If assessors are not well-trained or inexperienced, they may not accurately assess candidates' prior learning, leading to incorrect certification or recognition. To ensure high-quality assessments, assessors should receive specialized training and be continually monitored to ensure their competency.

Relevance of Learning Outcomes: The relevance and suitability of learning outcomes to the individual's career goals and aspirations are critical factors that can impact the effectiveness of RPL models. If learning outcomes are not aligned with an individual's goals, the recognition and certification provided by the RPL model may not be effective. To address this, RPL programs should be designed to ensure that the learning outcomes align with individual goals and that candidates have a clear understanding of the outcomes.

Acceptance and Perceived Value: The acceptance and perceived value of RPL certification by employers, industry bodies, and other stakeholders can significantly impact the effectiveness of the RPL model. If RPL certification is not recognized or valued, it may not lead to increased employment or career advancement opportunities. To address this, industry stakeholders and employers should be involved in the development of RPL programs and encouraged to recognize and value the certification provided.

Funding and Resources: The availability of funding and resources to support RPL programs is critical to their effectiveness. Inadequate funding or limited resources can restrict the scope and quality of RPL programs, limiting their impact. To ensure adequate funding, government and non-governmental organizations should work together to invest in RPL programs and provide necessary resources to support the development and implementation of effective RPL models.

To ensure the effectiveness of the RPL model in vocational training in Sri Lanka, researcher believes that there must be a concerted effort to increase awareness and understanding, improve access to programs, enhance the quality of assessment and learning outcomes, increase acceptance and perceived value of RPL certification, and provide adequate funding and resources to support RPL programs. It appears that the features that are successfully explored in learning environment research such as the perceptions of learners of the environment and the social and psychological factors will be of equal importance to research in VT environments. Moreover, Dean P. (2000) stated that it is clear that if the impact of training interventions is to be fully understood, the way in which the recipient learn must be considered. Thus, researchers believe that focusing more on the lifecycle of the trainees in the RPL category.

Access & Student Participation in VT in Sri Lanka – a Look at the Statistics

The NVQ framework of Sri Lanka has provisions to award NVQ level 1 to 4 craft level certificates through the RPL Model. According to the labour force survey 2019, the country has 1,307,767 Craft Related Trade workers and 1,375,540 Skilled Agricultural, forestry and fishery workers of whom only about 20 % has skills certification. According to a circular issued by the TVEC (NVQ Circular 02 /2021), to the “Vistas of prosperity and Splendour”, the development policy statement of the Government, 90 percent of those uncertified craft level workforce need to be certified. Nevertheless, from 2014 to 2019, only 77000 NVQ certificates through the RPL system have been issued. Therefore, the current pace of processing needs acceleration to be able to achieve the vision of the government. The e-RPL system introduced by the TVEC as a measure to overcome the practical hazels under the COVID 19 pandemic, expected to increase the number and pace of applications processing so that an increasing number of candidates could obtain NVQ through RPL Mode.

Measurement of Effectiveness of RPL Model

One of the world's leading vocational training educational and certifying institutions - City and Guilds of London Institute in the United Kingdom (2001) stated that in vocational education, the intended versus actual learning experience of learners is more complex and challenging. It further stated that a number of factors including the tutor, the learner, the classroom, the workbooks, and the assessments need to be considered. In essence, the participants' actual learning experience will be determined jointly by the individual and their environment. Fraser (1983) observed that an approach where indicators are not generated by the person or their environment separately - but rather by their fit or congruence with each other is based on a person– environment. Dean P. (2000) stated that the outcome of the training intervention is the summation of the interactions between training and recipient, rather than a one-way exchange of a discreet body of information or knowledge.

When consider about the RPL Model of VTASL, through the lenses of the researchers such as Dean P. (2000); Lucas (2015); Andrew et al. (2007); Athurupane (2008), workplace learning or RPL mode has following benefits in terms of measuring the success:

- It enables programme designers to measure the actual impact of change at the point of delivery,
- Early identification of specific gaps between intention and experience, and rhetoric and reality, means adjustments and refinements can be implemented during delivery.

When we dive deep into the literature on the topic, Koopman et al. (2012) & Meyer (2011), stated that learning environment instruments can be used to explore the association between learner outcomes and the designed environment, investigate the differences between learners' perceptions and tutors' intentions, and determine whether learners are successful in environments that suit their preferences. Similarly, Fraser (2012) observed that the feedback generated from the data can be used to guide changes to physical spaces, facilitate improvements in actual practice, and monitor the effectiveness of educational innovations. An instrument developed to investigate the learning environments created in VT contexts would be a valued tool. Past research into VT confirms current practice and emerging trends. For example, Fraser, 2012; Walker & Fraser 2015; & Fraser, 2001 revealed that anticipation of five broad themes will influence the identification and selection of specific scales and items into common indicators of performance measurements. Some of which are as shown below:

1. learner–physical environment interaction: the extent to which the student feels comfortable and enjoys learning in the physical space provided,
2. learner–learner relationships: the extent to which students work together, know, help, support and are friendly to each other,
3. learner–tutor relationships: the extent to which the tutor guides students in their learning and provides sensitive, ongoing, and encouraging support,
4. learner–resource interaction: the extent to which class activities are clear, well organised, stimulating, and assist student comprehension,
5. learners' reflection activities: the extent to which reflective activities are encouraged and how students enjoy learning and participating in this environment.

When considering the above literature review analysis, it clearly shows that effectiveness of VT measurement has to be done by studying the impact vocational training sector has over the involving parties, interacting process, atmosphere and the environment. As highlighted above, there is sufficient evidence to suggest that having a successful vocational training system is a key for the prosperity of many societies. The RPL Model can prove to be a game changer in realising the development goals of the government. It is a general perception among the industrialists that human capital is most important for the success of industries - it consists of current task-related knowledge and skills that can cater for the current and future skill sector needs; RPL Model offers a best opportunity to bridge the GAPS.

Significance of the Study

This review study is significant due to several reasons as summarized below:

1. This research is significant as it will examine the past literature in to wider education system. Literature review shows that Sri Lanka's Vocational Training (VT) sector contributes heavily towards the development of high-quality workforce by imparting knowledge and skills for its trainees. Many even see VT as part of the wider educational system & often referred as Vocational Education (VE).
2. Literature review shows that Sri Lanka has two major models of VT; they are a. to up skill youth with relevant knowledge and skills that cater to the industry requirement b. to regulate & up skill those who are already working in various industries without a professionally recognized qualification; this is also categorized as a workplace learning model, which is the focus of this research. This covers a larger working population currently estimated to be over 1.3 million active members of the working population. Therefore, this is an important study when considering the large no of population impacted by this.
3. Asian Development Bank - ADB Country Report on Sri Lanka (2014) observed that a student's decision to acquire vocational training depends on the perceived benefits; particularly financial benefits; this implies that one may give in to economic need rather than looking to learn a vocational skill to gain a long-term career success. Therefore, researchers believe that carrying out a literature review would help understanding the influences of vocational training.

Conclusion

This research paper written on the literature review in to the topic of "Factors Affecting the Effectiveness of Recognition of Prior Learning Model of Vocational Training in Sri Lanka ". Review shows that effectiveness of Vocational Training measures varied depending on multiple factors. Researchers such as Dean P. (2000); Babu et.al (2017); Lee at al. (2019); Lucas (2015); Babu et al. (2017) have carried extensive academic studies in the international arena. Literature review also shows that over the years, there has been change in the way the VT is disseminated. For example, the recent circular from the TVEC Sri Lanka on the RPL Model can be seen as revolutionary. Among the findings from this review following are some of the key findings emerged:

Need for better Clarity of RPL policies and procedures: Clear and transparent policies and procedures for RPL can help ensure consistency and fairness in the assessment process, which can enhance the credibility of the RPL model.

Quality of RPL assessment: The quality of RPL assessment is crucial in ensuring that learners receive appropriate credit for their prior learning. Assessors must be trained and competent in conducting RPL assessments and should use reliable and valid assessment methods.

Stakeholder engagement and support: Stakeholder engagement and support are essential for the success of RPL models. Employers, industry associations, and education and training providers should be involved in the development and implementation of RPL policies and procedures.

Learner motivation and engagement: The success of RPL models also depends on the motivation and engagement of learners. Learners who are motivated to participate in RPL and actively engage in the assessment process are more likely to succeed in obtaining credit for their prior learning.

Recognition of RPL outcomes: The recognition of RPL outcomes is crucial for the credibility and success of RPL models. RPL credits must be recognized and valued by employers, education and training providers, and other stakeholders.

This review shows that the effectiveness of RPL models may vary depending on the specific context and implementation strategies. Conceptualization of the workplace learning built on the contextual nature of the work. It is also a notable that generalization approach may not be the best to understand the workplace learning model of the vocational training. Therefore, further research is needed to investigate the factors that affect the effectiveness of RPL models in different contexts.

Environmental factors such as current CPVID 19 pandemic situation, technology usage in the workplace, ever increasing demand for efficient skilled work force and focus on the higher value-addition in work places, have increased the demand for vocational training system that is blended with the on the job training.

RPL system not only offers millions of those who are already skilled by working under a master or in other wards a recognized skilled person yet do not have a recognizable professional qualification. Past studies also point out that vocational training is one of the most difficult educational sub-sectors to monitor and control due to its number of complexities that are constantly changing, especially the RPL model.

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