The Relationship between Work Experience, Qualifications, Performance, and Staff Perception of Digital Talent in the Workplace

Irwan Noor¹, Nur Ambulani²

¹ Department of Public Administration, Faculty of Administrative Science, Universitas Brawijaya, Malang, East Java 65145, Indonesia
² Institut Ilmu Sosial dan Manajemen STIAMI, DKI Jakarta 10530, Indonesia

A B S T R A C T

The biggest challenge in developing digital talent in tertiary institutions is viewing digital reform as a massive entity. Therefore, it is rare to focus on the values of developing digital talent for existing education personnel. Using a growth theory mindset, the research focuses on Working Period, Performance, and Qualification, to see the relationship with Talented education staff. The research uses a sequential explanatory design. The sample consisted of 29 ASNs in one of the faculties of a state university in Indonesia, with random sampling using the online Sample Size Calculator. Questionnaire data were analyzed by SPSS, while interviews with NVivo-12 Pro. The results reveal that both the Working Period, Qualification, and Performance variables correlate with the Talented education staff. The direction of the relationship also has a positive (+) value. However, qualitative analysis revealed that the activities carried out were more directed at fulfilling the main duties and functions. Behind that, the biggest challenge for them is when dealing with students, who generally come from the digital generation. Therefore, digital reform in higher education also pays attention to developing digital talent for education staff.

INTRODUCTION

Digital transformation (DT) has become a major issue for higher education in the second half of the 21st century. Becoming a more flexible, affordable, and accessible institution and retaining students is the reason for this change [1-3]. DT in education means digitizing processes and products to enhance the teaching and learning experience for everyone involved [4]. Therefore, DT is seen as a must if the higher education is to maintain its reputation [5]. In addition, so that higher education has a competitive advantage and international ranking, improve performance and expand institutions, educational institutions then expand their activities by transforming to digital. Dilmegani (2022) revealed three DT focuses in the field of education, namely (1) Accessibility. Digital technology allows students to access learning resources easier and cheaper. (2) Interactive learning. Technology and the availability of a wide variety of applications, learning formats are becoming more interactive, and (3) Customized learning [4]. Computer technology-enabled teaching methods can align with student expectations. Higher education to achieve digital transformations invests substantial funds. Nonetheless, the digital talent gap is still an obstacle to successful transformation. “digital-first mindset” as the key for higher education to be successful in its transformation, is still an obstacle [6]. Many higher education institutions view DT as a massive entity. This condition causes higher education to focus more on tool development. Regardless of other crucial factors in DT, namely Cultural Transformation. That is, when there is a shift in the world of DT, it is necessary to redefine the organizational mindset, processes, talents, and capabilities of the actors in the organization [7].

One of the actors in higher education facing these changes is the academic staff. Research conducted by Jabil [8] revealed that the main obstacle in digital transformation is Handling Employee Pushback. He revealed “During Digital Transformation by our very nature, humans like routines—they make us feel comfortable. It is called the comfort zone for a reason. Things can easily start to seem grim when our routines are changed and uncertainty enters our lives. Experiencing a digital transformation is the epitome of discomfort——so it may make employees feel threatened.” Digitization of paper documents into electronic files, fast connections, and agile organizations connected to wireless networks has made significant changes for academic staff. That is why transforming higher education need to harmonize the development of digital systems with building adaptation values. Changing mindset of academic staff to a
digital mindset. Cardenas' and Esteves research [9] reveals that digital dilemmas occur in the struggle to build digital talent. It is basically, digital transformation is a total business transformation. Digital transformation is the process of using digital tools—particularly data and technology—to deliver value and drive change. For academic staff, it is necessary to align these changes by building digital talent. Digital talents are talented employees who can adapt to digital technology. In addition, DT makes information more symmetrical, meaning everyone can access it with information disclosure. Therefore, it is first necessary to build digital talent values.

The form of digital talent of academic staff is the cognitive component, which refers to the knowledge and action component, rejection or acceptance of the use of digital technology. However, studies on this matter are still minimal. Digital talent studies in higher education are more about studying the role of institutions, leaders, or students [10, 11] even though several studies show a significant relationship between digital mindsets and the availability of human capital to industry 4.0 [12]. Studies on talent in education staff, especially with regard to work values, namely working period, qualifications, and performance have not yet been discussed. This is the novelty of this research.

Whereas in the face of change and the need for digital talent for academic staff, it is necessary to be ready as soon as possible. Changes are not only in the form of specialized skills, but skills need to be a concern. Work-life balance is what these changes are all about it. The emergence of technological stress or tech stress or some psychological complaints may accompany education staff dealing with these situations.

Readiness to face such turbulence, especially readiness for academic staff, requires understanding and knowledge. Based on this identification, the question is: How to build and what are the main levers in developing digital talent among education staff? In this context, the research aims to provide an understanding of the development of digital capabilities among educational staff. Additionally, the research will explore and identify the key factors in the development of digital talents among educational staff. The results of this research are expected to provide valuable insights to policymakers in enhancing the capacity and digital skills of educational staff.

**Hypothesis Development**

Academically, there is no definitive agreement on the definition of digital talent [13]. The description generally defines digital talents as people who can adapt to digital technology and understand the development of industry 4.0 [14]. Demirk and Spohrer [15] defines it as "(people) who are comfortable with information systems and modern management techniques." Meanwhile, in Shalamanov view [16], Digital talent is a trendy way to refer to anyone who works in tech, specifically in roles like programming, data, and automation. Anyone who helps an organization with digital transformation could be considered a digital talent. Digital talent or digital talent are employees who can adapt to digital technology. Not only know developing technology, but digital talent understands how to use, manage, and optimize existing technology [17]. The key word is talent. The systematic literature review conducted by Kravariti & Johnston [18] categorizes talent as: (1) individuals with distinctive abilities; (2) having better performance; (3) leading to the capability aspect; and (4) integration between capabilities and competencies possessed will produce the best quality in completing a job. Thus, talent is related to attitude. Digital talent is anyone who can adapt to information technology because they understand it and can apply it to organizational achievement. The study leads to the Growth Mindset Theory. The theory departs from the assumption that a person's capabilities can be increased through dedication and continuous activity through hard work to change them. Achieving this requires openness to information. Individuals behave positively when their mindset changes to all new information. Dweck [19] reveals four aspects of a growth mindset: (1) You can develop a belief in your intelligence, talents, and character; (2) Achieving this requires openness to information; (3) Individuals behave positively when their mindset changes to all new information; (4) Confidence in criticism and input from others as bait for success. In another, Smith [20] suggests ways to develop a mindset, namely: (1) Realize that, scientifically, you can improve; (2) Remove the 'fixed mindset' inner voice; (3) Reward the process; (4) Get feedback; (5) Get out of your comfort zone; (6) Accept failure as a part of the process.

In a study conducted by the Center for Research and Education and Training of Apparatus Sobandi et al. [1], the criteria used to get talented employees is to use Q-CAP which consists of Qualification, competency, attitude, and performance. First, qualifications are employee criteria viewed from the aspects of education, training, rank, position, and class. Second, competence is the knowledge, attitudes, and skills of an employee to achieve the success of a certain job. Third, the behavior that is born from the mindset and attitude that is already attached to an employee so that it becomes a habit and is reflected in all work activities. Behavior can be measured from three aspects: discipline, honesty, and initiative. Fourth, performance is the result of the work achieved by an employee, both in terms of quantity and quality.


Based on the studies above, there are several concepts that become a concern in previous research, namely Working Period, Performance, Qualification, and Talented employees. The interrelationships between these concepts are described as follows.
Based on the theoretical model in Figure 1, the following hypothesis can be made: "There is a correlation between working period, qualifications, and performance with an understanding of digital talent". Statistically, this hypothesis is stated as follows:

H₀: There is no relationship between working period, Qualifications, Performance, and staff understanding of digital talent.

H₁: There is a relationship between working period, Qualifications, Performance, and staff understanding of digital talent.

METHOD

Types and Determination of Research Locations

Using Mix Methods, this study combines quantitative and qualitative research methods in Sequential explanatory designs. The first stage is done by using quantitative. The proposed hypothetical model is faced with a phenomenon that has been selected by a simple random technique. Information is collected through responses from the objects that have been selected, which are also carried out randomly. The data collection tool, namely the questionnaire, was first tested for validity by measuring the validity and reliability of the instrument. The second stage uses a qualitative method. Triangulation, regarding the convergence of data, is carried out in this stage. Various narratives, information during research with qualitative methods assist researchers in testing the proposed hypothesis model.

To confront the ideas contained in the hypothetical model, the stages are carried out using the method simple random technique. This method is used in determining the research location. For the purpose of this research to obtain an even picture that can represent the character of all research objects, this method is used. The university studied had 18 faculties. Based on the simple random technique method, one faculty was chosen as the place of research.

Variables, Indicators, and Explanations

Based on the theoretical model above, there are four variables proposed in this research activity, namely:

Working Period

Refers to the time education staff spent in their field of work. This can be observed from the following indicators: a) Work experience, which is the number of years the respondents have worked in their field. This measure aims to assess the respondents' insights and familiarity with work practices and challenges; b) Number of roles, which refers to the number of different roles or positions the respondents have held. This aims to determine the respondents' adaptability and responsibility; c) Track record, concerning the tasks successfully carried out by the respondents. This highlights their competencies, reliability, and ability to effectively meet goals.

Qualifications

Refers to formal education, certifications, and specialized training obtained by individuals to enhance their knowledge and skills in a specific field. The indicators are as follows: a) Educational qualifications, formal education or certificates obtained. This indicates the level of theoretical knowledge and basic understanding in the field; b) Training attended: additional courses beyond formal education attended by the respondents. The aim is to assess the respondents' commitment to continuous learning and professional achievement in their field of work.

Performance

Refers to an individual's ability to achieve desired outcomes. The indicators are: a) Achievement of work targets, which is the individual's success in meeting set targets. This indicates the respondents' ability to contribute to organizational success; b) Feedback, which is the feedback received from colleagues regarding the respondent's performance. Positive feedback indicates competence, professionalism, and their ability to collaborate effectively; c) Adaptability skills. This indicator assesses flexibility, problem-solving skills, and individual resilience in the face of changing circumstances.

Digital Talent

Assessed through the Staff's Perception of Digital Talent in the Workplace. The measure focuses on employees' perception of digital skills and abilities in the workplace.

Research Data Management

In this research, several instruments were used to collect data, namely:

Questionnaire

This instrument is used to collect data through a series of questions related to work experience, qualifications, performance, and staff perception of digital talent. The questionnaire contains structured questions with specific answer choices, as well as open-ended questions that allow respondents to provide detailed responses.

Likert Scale

Used to measure the level of agreement or opinion of individuals, particularly regarding the constructs being studied, such as work experience, qualifications, performance, and staff perception of digital talent. Respondents are asked to rate the extent to which they agree or disagree with each statement using the provided rating scale.

Interviews

Used to collect data directly from respondents. The interviews are structured, with a predetermined set of questions. Interviews provide an opportunity for researchers to gain a deeper
understanding of work experience, qualifications, performance, and staff perception of digital talent.

With regard to the use of quantitative methods, the main tool used is a questionnaire. There are three stages carried out, namely:

- Testing the research instrument (questionnaire). Questionnaire trials were conducted on 15 respondents who were not included as research objects. The validity test used the product of moment correlation (r) with a confidence level of 95% (one-sided test). The reliability test used statistical tests with K-R 20 and K-R 21. The results of the instrument validity test showed that the questions asked were all valid (Table 1). In connection with the questions asked more using dichotomous questions, the reliability measurement uses the formula developed by Kuder and Richardson, known as the K-R 20 and K-R 21 formulas. The test results produce reliable question items to be carried out to research participants for further activities. The measurement results are calculated as presented in Table 2.

- Determination of the data source (respondents). The research unit is the State Civil Apparatus (ASN) in selected faculties. Based on data obtained through the website of the faculty concerned, there is 76 ASN education staff until September 2021. Using a confidence level of 95% with a margin of error (degree of accuracy) of 0.05, the research sample obtained is 29 ASN. The determination was based on a sample size calculator developed by The Research Advisors. Sample selection was done by a simple random method with a lottery model.

- Data collection. Data collection in research, especially with regard to primary data, is carried out by sending a list of questions via social media, in this case using a google form that is sent to each respondent via social media. As for the data in the form of performance activities, it is excavated by taking into account the data of the respondents’ performance reports.

### Data Analysis

There are two analyzes in this study, which are quantitative (descriptive and inferential) and qualitative (narrative). First, a description of the object under study is conducted. This activity aims to describe the phenomenon of the respondent. After that, the correlation was tested for each concept that was applied to the hypothesis model. The purpose of correlation analysis is to see the strength of the relationship and the direction of the relationship between each concept. The analysis uses the SPSS program. The results of the inferential analysis were then studied further by exploring their meaning through interviews with respondents. There were 10 respondents who were interviewed using open-ended questions. The results from these interviews were then analyzed using the NVivo-12 Pro program.

### RESULT AND DISCUSSION

#### Overview of Research Objects

**Respondent Demographics**

Most of the respondents studied were male (59%), while female respondents were 41%. Based on the employment distribution, we can say that each sub-section has a representative in this study. Each subsection is represented by two or more.

**Working Period**

If we look at the respondents’ working period as civil servants, it turns out that the most extended working period was for those who had worked between 10-15 years, namely 41.4%. Meanwhile, respondents who had worked for less than five years were 3.4%. Respondents with a working period of 5 < 10 years were 34.5%, while 20.7% of respondents had worked for more than 15 years.

**Performance Appraisal**

Three criteria in assessing the performance. (1) service orientation. Generally (87.5%) state what they do by the main duties of the respondent's job; (2) work initiatives. Respondents work not because of superiors. They work on their initiative without waiting for a leader to appear. Even though the leadership is not in place, they still work by the tasks stated in the job description sheet. Most of the respondents (62.5%) stated that they remained focused on work without supervision from their superiors; and (3) cooperation. Respondents always take the initiative to do work with "a risk." If they encounter problems, they will ask their colleagues for help. Respondents generally stated that they always cooperate in completing work, especially regarding colleagues who ask for help. Respondents (37.5%) said they saw the situation as an assistant based on their competence or specialization capacity.

### Table 1. Summary of Validity Test Results

<table>
<thead>
<tr>
<th>Question number</th>
<th>( r_{xy} )</th>
<th>( r_{table} )</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.574</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>2</td>
<td>0.721</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>3</td>
<td>0.528</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>4</td>
<td>0.518</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>5</td>
<td>0.528</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>6</td>
<td>0.538</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>7</td>
<td>0.574</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>8</td>
<td>0.604</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
<tr>
<td>9</td>
<td>0.593</td>
<td>0.4409</td>
<td>Valid</td>
</tr>
</tbody>
</table>

### Table 2. Table of Reliability Test Results K-R 20 and K-R 21

<table>
<thead>
<tr>
<th>Reliability Test</th>
<th>( \Sigma ) Participants</th>
<th>( \Sigma ) Questions</th>
<th>Variant Total</th>
<th>Reliability Coefficient</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-R 20</td>
<td>15</td>
<td>9</td>
<td>5.422</td>
<td>0.756</td>
<td>High Reliability</td>
</tr>
<tr>
<td>K-R 21</td>
<td>15</td>
<td>9</td>
<td>5.422</td>
<td>0.736</td>
<td>High Reliability</td>
</tr>
</tbody>
</table>
Qualification

Based on research, most of the respondents have a bachelor’s degree. There is 75.9% of them with a bachelor's degree. Respondents with high school education were 6.9%. As 17.2% have a graduate education.

Understanding of Digital Talent

Regarding the Knowledge and understanding of respondents, it turns out that 69% said they knew the concept of digital talent, and 6.9% responded said they did not know. As much as 24.1% of the respondent doubted the concept. However, if explored further, 51.7% of respondents do not understand the concept, even though they have and know the concept. Only 6.9% of respondents stated that they know and understand the concept of digital talent. 41.4% were hesitant to answer that they understood the concept. When testing the relationship between these concepts, each indicator has a positive relationship. However, if examined further, it turns out that the level of education only 3.1% contributes to understanding digital talent. Meanwhile, knowledge contribution accounts for 39.5%. It is different from the respondent’s working period. Using Spearman’s ranking, work period contribution of 51.6% to understanding digital talent.

Hypothesis Test Results

The qualifications and performance of respondents often reveal varying perspectives on talent. According to the survey results, a majority of general respondents (65.5%) possess moderate qualifications when it comes to understanding digital talent. Among these respondents, only a small fraction (3.4%) demonstrates a high level of qualification, while the remaining 31.1% have lower qualifications in this area.

Interestingly, the performance of the respondents presents a different picture. Out of the total respondents, 65.5% exhibit good performance, indicating a strong level of competence. Conversely, a mere 6.9% display poor performance, suggesting a lack of proficiency. The remaining 27.6% fall within the moderate performance category, indicating a satisfactory but not exceptional level of capability.

Examining the digital talent factor specifically, it is noteworthy that 13.8% of respondents showcase high-scoring talent. These individuals possess remarkable skills and aptitude in the digital realm. Additionally, a significant proportion (69.0%) of respondents attain medium scores, indicating a moderate level of talent. However, it is concerning to observe that 17.2% of the respondents exhibit low talent scores, suggesting a limited grasp of digital skills and abilities.

These findings shed light on the divergence between respondents' qualifications and their actual performance. While a significant portion of the respondents possess moderate qualifications, a majority demonstrate good performance. This suggests that qualifications alone do not necessarily guarantee high performance. On the other hand, the distribution of digital talent scores reveals a more balanced representation, with a considerable number of respondents falling within the medium score range.

To optimize talent acquisition and development strategies, organizations should consider these variations in understanding and performance. It is crucial to recognize that qualifications may not always accurately reflect an individual's potential to excel in digital roles. Identifying and nurturing individuals with high-scoring talent can lead to significant contributions to the organization's digital capabilities. Moreover, providing training and resources to enhance the skills of those with low talent scores can help bridge the gap and unlock their untapped potential.

By leveraging these insights, organizations can foster an environment that promotes the growth and utilization of digital talent effectively. This comprehensive approach ensures that both qualifications and performance are considered, ultimately enabling organizations to harness the full potential of their human capital in the digital age. The correlation of each variable is described in Figure 2.

![Figure 2: Significance relationship between concepts](image)

Based on Figure 2, the results of the Rho-Spearman statistic test, the significance value of tenure and qualification is smaller than the predetermined alpha value of 95% (rho-count value <0.05). It means that both variables (service tenure and qualifications) have a significant relationship with staff understanding of digital talent. The performance has a significance value. It is much greater than the alpha value (0.05), or the rho count is greater than the predetermined alpha value. Thus, there is no significant relationship between the two.

The results of the analysis by using the SPSS program, in both variables, working period and qualification, have different correlation coefficients. The working period has a correlation coefficient of 0.516, which means the correlation between the working period and staff understanding of digital talent is very strong (561.6%). Conversely, qualification has a correlation coefficient of 0.364. It means that qualification has a moderate correlation strength to staff understanding of digital talent.

The direction of the relationship between the two variables (years of service and qualifications) is positive (+) on the staff's understanding of digital talent. It means that the longer the work period of education staff in the workplace, their digital talent understanding is better. The qualifications of education personnel are not much different. The higher the Qualification, the better their understanding of digital talent will be.

DISCUSSIONS

Digital reform brings changes in the way of life and behavior, and education is no exception. Education staff who deal with the digital world every day, of course, also experience changes in service delivery. These differences have an impact on service delivery. Generally, the education staff is face-to-face with the world of phenomena.
Field of Work

The development of the digital world requires education staff to keep pace with these changes. Higher education that continues to improve educational facilities will have consequences for them to follow these changes. This change certainly will lead to two choices, viz. to survive the changes or develop following the development of technology which has always been the focus of higher education institutions. The two choices certainly still cause turmoil in the personality of each educational staff. Work stress or emerging technology stress can accompany it. In this regard, the leadership’s role in developing employee digital talent, namely through studies on the growth mindset of education staff. The statistical analysis of this study indicates that the education staff is more directed toward technical activities. They work because they are supposed to work. If so, the impact is that education staff rely only on fulfilling the quantity of work without paying attention to quality demands. The key to successful digital talent management is to ensure that higher education leaders need a clear understanding of the personal drivers of their digital talent assets and that everyone has the resources to deliver on these higher education innovations. It is too.

Student

The social order in the era of digitalization, which then gave rise to a new era, namely digital society, will face the Gen Z generation or the i-generation born in 1995 – 2010. The shift in order is an inevitability for the previous generation. Future students are students in the i-generation group. Generations were familiar with the world of information technology. This condition leads to fast, easy, and cheap service. This change also requires educational staff to provide services to students. Therefore, need to develop digital talent for education staff, training, or adding insight through the certification route. They are not only equipped with skills in the digital world but also have skills in providing services to the digital generation. Based on the above analysis, the study implies the need for emphasizing the adaptation and development of digital skills for academic staff to face changes in the education world influenced by technological advancements. Additionally, the implications of this study provide input on the necessity for educational staff to understand the developments in the digital world. The goal is to enable academic staff to provide services suitable to the needs of the current generation of digital-native students by having a comprehensive understanding of these changes.

CONCLUSION

Digital reform is a change. This research reveals the importance of system improvement in facing the challenges of digital reform. However, it is not just about hardware. In this context, academic staff not only need to adapt to constantly evolving hardware but also be able to interact with students from the digital generation. This research reveals that higher education only directs academic staff towards technical activities and fulfilling their core tasks and functions. Although statistical analysis shows a relationship between the tested factors, the values behind the activities also have some influential value. However, attention to digital talent needs to be a concern for college leaders as well. Especially, attention to how to develop and cultivate the mindset of educational personnel. Based on these findings, there are several suggestions for further research related to digital reform in an educational context: (1) Further research needs to examine the most relevant and needed digital skills and competencies for educational staff. This study will help in designing the most appropriate programs for enhancing the professional development of academic staff; (2) The need for comparative studies with different approaches. This research will provide input for improvements in the practice and effective strategies for the use of technology in learning; (3) In-depth studies with a policy evaluation approach are needed to examine the effectiveness of training programs for academic staff that have been conducted so far, particularly regarding the development of digital talent. By conducting further research and comparing it with the above findings, universities will be better prepared to face changes in the education world. Additionally, with advanced studies, the development of academic staff will be more focused on addressing digital transformation.

REFERENCES


AUTHOR(S) BIOGRAPHY

Irwan Noor
Irwan Noor is a Lecturer in the Faculty of Administrative Sciences, University of Brawijaya Malang. Dr. in the field of Public Administration. Writing in various national and international journals, in the study of apparatus human resources, especially on the theme of innovation.

Nur Ambulani
Nur Ambulani is a Doctor of Communication Science and Master of Public Relations. He has several experiences as a Director in a Financial Institution and a Director in a Technology Company ITEASCO, BNSP Digital Certified. Lecturer at the Jakarta STIAM Institute, FVOKASI, FEB, Brawijaya University, Marketing and Partnership NATA Academy Jakarta Entrepreneur Consultant, and Social Media Instructor.