# The School Teachers' Creativity and Self-efficacy in Writing an Academic Text: A Rasch-Based Survey Analysis

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**Abstract.** *The present study aimed to examine the academic writing creativity and self-efficacy of Indonesian school teachers. Under a survey design, a five-point Likert scale of Academic Writing Creativity and Self-Efficacy (ACSE) questionnaire was distributed to school teachers in Jakarta, Bogor, Depok, Tangerang and Bekasi, of which 262 teachers voluntarily completed it. Rasch analysis was conducted on the quantitative data, with the results showing that almost half of Indonesian school teachers possess a low level of academic writing creativity and self-efficacy (N=112, or 48.7%), some with a moderate level (N=88, or 38.3%), and a few with a high level (N=30, or 13%). Although teachers were found to have a strong ability to seek feedback on their writing from their colleagues and to make decisions about whether to accept or reject it, they lacked creativity in their academic writing, particularly their skill to express original ideas using a wide range of words and expressions in a grammatically correct manner. Moreover, their competence in utilising technology for writing resources and assistance, such as researching pertinent literature, referencing accurately, paraphrasing effectively and addressing spelling and other language errors, was limited. Discussion to the findings were presented in the article and recommendations were offered regarding further academic writing training and research.*

**Keywords:** *Academic Writing Creativity, Self-Efficacy, Academic Text, School Teachers, and Rasch-Based Analysis*

## INTRODUCTION

The publication in a peer-reviewed journal, both at national or international level, has now become a requirement for career promotion for scholars, teachers in higher education institutions (Flowerdew & Habibie, 2022; Li et al., 2018; Li & Flowerdew, 2020; Mulyono & Artarini, 2021) and school teachers. Particularly in the Indonesian context of teachers' career and professional development, publication is also used as a criterion for promotion or career advancement for school teachers (KemenPan-RB, 2009). In the Regulation of the Ministry of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia, no. 16 of 2009, it was asserted that teachers are required to conduct a classroom action research to seek alternative solutions for their teaching practices, and publish the research report article. For instance, in Chapter V, verse 11, point 2(c), it is stated that teachers must publish their research or other innovative works as part of their professional development activities. This statement is further emphasised in Chapter VII, verses 13, 16 and 17.

Unfortunately, due to the complexity of academic writing (see Ansarifar et al., 2018; Maamuujav et al., 2021), many Indonesian scholars, students, and teachers have encountered difficulties when writing for publication purposes. Many Indonesian literature on academic writing has demonstrated their lack of knowledge and competence in several aspects, including academic

writing structure, vocabulary, and grammar (Antara et al., 2016; Husin & Nurbayani, 2017), as well as severe problems in developing academic text properly, which complies with accepted rhetorical moves and organisations (Arono & Arsyad, 2019; Arsyad & Arono, 2016; Mulyono & Artarini, 2021; Sanjaya et al., 2015). This has put scholars, university teachers and students, and school teachers at a disadvantage when attempting to produce and publish good quality academic writing texts in national and international peer-reviewed journals (Arsyad et al., 2020; Arsyad & Arono, 2016). This, in turn, has a direct impact on their prospects for career progression.

Many universities and education bodies have collaborated to organise academic writing training and workshops, designed to help school teachers write and publish their classroom action research reports. The training has been intensively promoted, particularly by national and local education bodies, as a response to the publication regulations in order to enable teachers to advance their teaching careers at their schools. During the course of 2022 exclusively, for example, the existing literature published in national journals and databases has highlighted the efforts to further enhance teachers' classroom action research (CAR) capabilities and manuscript writing from the completed research reports. To name a few, Siburian et al (2022) documented their effort to help senior secondary school teachers at Jambi province, Indonesia, to write academic text from the CAR they already did. The efforts include the presentation of CAR procedure, instrument development, and technical procedure on CAR paper writing. Other scholar, Luji et al (2022), focused their training on how to develop background of the problem section, formulating the problems, reviewing the relevant literature, developing method section, writing discussion, summary and references. Kristiawan et al (2022) organised a similar academic writing workshop with the previous two scholars, but with an emphasis on the publication procedure.

Despite the widespread use of academic writing training and workshops, there is little evidence of the effectiveness of such programmes in improving school teachers' academic writing for publication purposes. Indeed, the literature on Indonesian teachers' classroom action research and academic writing for the publication of research reports is largely lacking in sufficient evidence and thorough discourse, making it difficult for readers to accurately assess the effectiveness of the training and workshops conducted. An important question concerning the use of academic writing training and workshops for teachers to write a publication-worthy manuscript from the classroom action research they have already conducted is the extent to which such programmes enhance their academic writing creativity and self-efficacy. In this paper, creativity in writing an academic text is perceived as the writers' ability to think creatively and to address particular issues they encounter during the writing process (Allison, 2004). This includes being able to generate ideas for the text, locate relevant evidence to support arguments, and express these arguments creatively, both through linguistic forms and features (Allison, 2004; Evans, 2013). Self-efficacy, on the other hand, is regarded as the level of confidence authors possess in applying their linguistic knowledge and proficiency to communicate their ideas effectively in written academic discourse (Teng & Wang, 2023).

In the current study, we explored school teachers' creativity and self-efficacy in writing an academic text. Particularly, we aimed to address two research questions; do school teachers possess writing creativity and self-efficacy in writing an academic text? and do school teachers' academic writing creativity and self-efficacy differ across their academic writing experience, age, gender, education background and level of teaching?

**METHOD**

A survey method was adopted to address the research questions of the current study. A five-point Likert scale of Academic Writing Creativity and Self-Efficacy (ACSE) questionnaire, offered by Mulyono, was distributed in hybrid modes to Indonesian school teachers in Jakarta and its surrounding cities (i.e. Bogor, Depok, Tangerang and Bekasi). In total, using a non-probability sampling technique, 262 teachers voluntarily completed the questionnaire, giving their consent for the researcher to use their responses. In the screening process, however, four datasets with missing values, and twenty-eight outliers, were identified. Consequently, these missing values and outliers were removed, leaving 230 data for further analysis. School teachers' demographic aspects such as academic writing experience after completing their study, age, gender, education background and level of teaching.

ACSE questionnaire was developed to collect the quantitative data from the participants. The development of ASCE was done by adapting and expanding the earlier version of Mitchell et al.'s (2021) Situated Academic Writing Self-Efficacy Scale (SAWSES), consisting of four scale constructs: 'Writing Essentials' (WE), 'Relational Reflective Writing' (RRW), 'Creativity Identity' (CI) and 'Technology Use to Support Writing and Writing Creativity' (TUSW) (Mulyono et al., 2023). The questionnaire was examined for its internal consistency using the data of the current study and revealed a Cronbach's alpha of 0.95, indicating a very high level of reliability. This high level of reliability was also shown in the previous studies by Mulyono et al (2023). The reliability for each construct of the current study's instrument is detailed in Table 1.

**Table 1. Reliability of the Questionnaire Constructs**

| Scale | Total Item | Type of Response | Cronbach's Alpha |
|---|---|---|---|
| Writing Essential (WE) | 9 | Strongly Disagree (1) to Strongly Agree (5) | 0.84 (High Reliability) |
| Rational Reflective Writing (RRW) | 8 | Strongly Disagree (1) to Strongly Agree (5) | 0.79 (Relatively High Reliability) |
| Creative Identity (CI) | 8 | Strongly Disagree (1) to Strongly Agree (5) | 0.83 (High Reliability) |
| Technology Use to Support Writing & Writing Creativity (TUSW) | 9 | Strongly Disagree (1) to Strongly Agree (5) | 0.87 (High Reliability) |

The Rasch statistical analysis using Winstep software was performed on 230 datasets, including the fit analyses, the Wright map analysis and the differential item functioning (DIF) (Ekawati et al., 2021). Rasch analysis, an item-response theory based statistical analysis, focuses its examination of a latent trait model to explain the interaction between the participants' responses and the questionnaire items using a probabilistic model (Ackerman, 1994; Ningsih et al., 2021). In Rasch analysis, the raw score is converted into logits for each response to ensure that each measurement unit has the same interval, allowing the same length between two measurements (Colledani et al., 2020; Ningsih et al., 2021). In the current study, Rasch analysis was selected due to its suitability in examining the raw ordinal data from the questionnaire and its ability in determining the distribution of participants' responses in relation to the item difficulty level (Ekawati et al., 2021; Mulyono & Suryoputro, 2020; Ningsih et al., 2021; Zulaiha & Mulyono, 2020).

## FINDINGS

### School Teachers' Self-Efficacy and Creativity in Writing an Academic Text

The first research question addressed the level of school teachers' self-efficacy and creativity in writing an academic text. To answer this, the Person-Rasch Wright map was developed, and the participants' responses to the questionnaire items were analysed, as depicted in Figure 1.
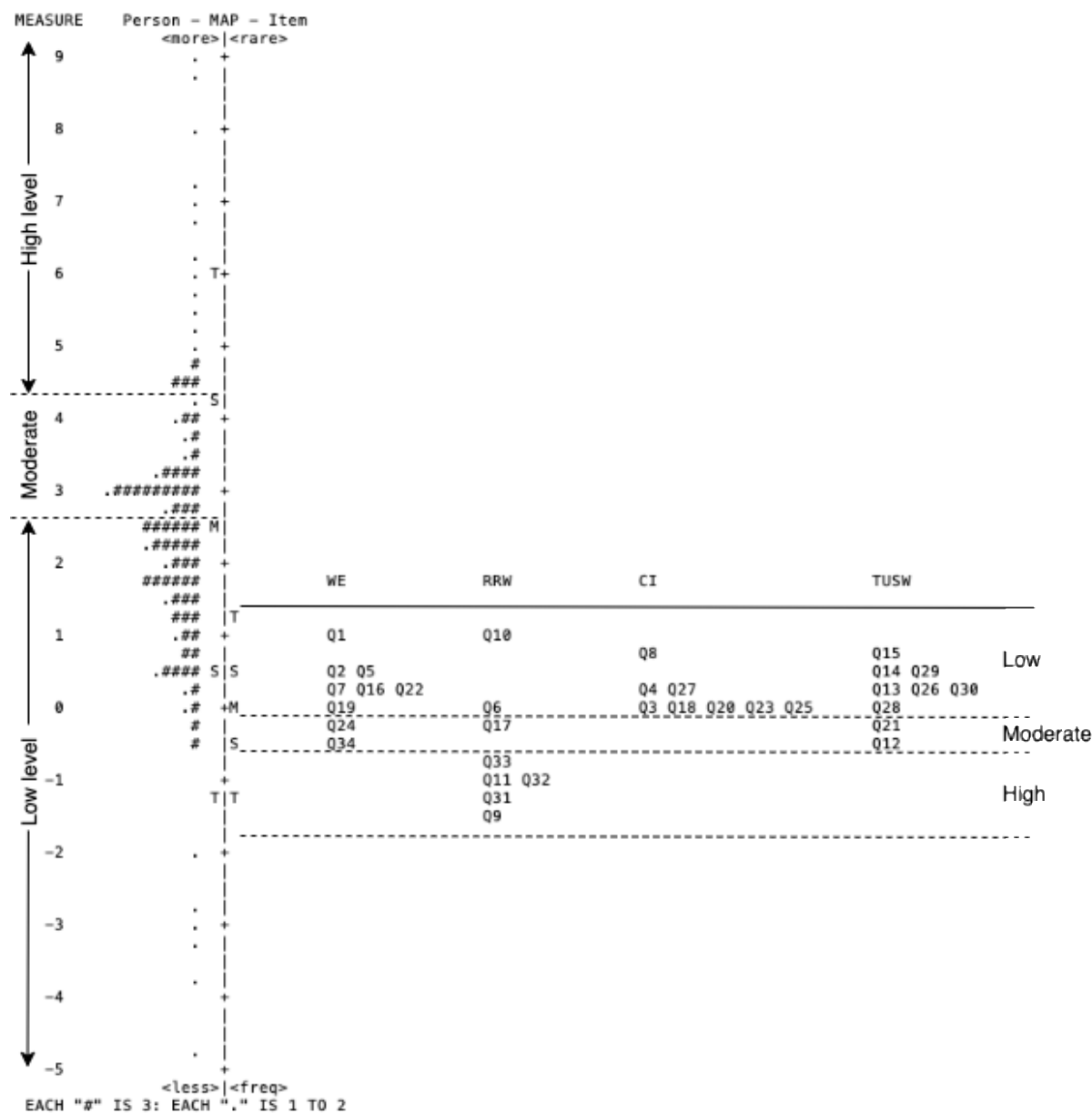


**Figure 1. Wright Map Analysis on the Person Responses**

As illustrated in Figure 1, the Wright map is divided into two parts: a person distribution map to the left and an item distribution map to the right. The vertical line in the middle reflects three main points: M (mean), S (one standard deviation of mean, M ± Standard Deviation), and T (two standard deviations of mean, M ± 2*Standard Deviation). The mean and the standard deviation of person measure were observed to be 2.44 and 1.98 logits, respectively. Using the

classification of M, S, and T as shown in the vertical line of Figure 1, it can be seen that almost half of Indonesian school teachers possess a low level of academic writing creativity and self-efficacy (N=112, or 48.7%), some with a moderate level (N=88, or 38.3%), and few with a high level (N=30, or 13%). The item distributions depicted in the right-hand side of the Wright map (see Figure 1) suggested that teachers had a high ability to seek feedback on their writing from their colleagues and to make decisions about whether to reject or accept it. Nevertheless, teachers demonstrated a lack of creativity in their academic writing, particularly their ability to express original ideas using a broad range of words and expressions in a grammatically sound manner. Furthermore, their competence in utilising technology for writing resources and assistance, such as utilising technology to research pertinent literature, reference accurately, paraphrase effectively and address spellings and other language issues, was limited.

**The Difference of School Teachers' Academic Writing Self-Efficacy and Creativity across Their Demography**

The second research question enquired as to whether there were any differences in school teachers' academic writing self-efficacy and creativity across demographic categories. To address this question, the current study first examined the descriptive statistics of the person-measure and then classified them according to demographic variables. A person-differential item functioning (DIF) analysis was subsequently carried out in order to reveal any discrepancies in participants' responses to the questionnaire items based on demographic characteristics. Many literature (Chan & Subramaniam, 2020; Mulyono et al., 2020; Ningsih et al., 2021) have suggested that DIF could be examined when the DIF contrast value exceeded the standard value of 0.5 logits and was statistically significant (Rasch-Welch $p < 0.05$). Table 2 provides details of the levels of academic writing creativity and self-efficacy across participant demography; and Table 3 presents the occurrence of DIF for some demographic variables.

**Table 2. School Teachers' Level of Academic Writing Creativity and Self-Efficacy**

| Demography | Description | N (%) | Low (%) | Moderate (%) | High (%) |
|---|---|---|---|---|---|
| Academic Writing Experience | None (A) | 127 (55.2) | 72 (56.7) | 41 (32.3) | 14 (11.0) |
| | Writing Academic Texts: 2 – 5 Articles (B) | 88 (38.3) | 37 (42.0) | 38 (43.2) | 13 (14.8) |
| | Writing Academic Texts: > 5 Articles (C) | 15 (6.5) | 3 (20.0) | 9 (60.0) | 3 (20.0) |
| Age | < 30 y.o (X) | 100 (43.5) | 49 (49.0) | 35 (35.0) | 16 (16.0) |
| | 30-40 y.o (Y) | 102 (44.3) | 45 (44.1) | 45 (44.1) | 12 (11.8) |
| | > 50 y.o (Z) | 28 (12.2) | 18 (64.3) | 8 (28.6) | 2 (7.1) |
| Gender | Female (F) | 165 (71.7) | 81 (49.1) | 67 (40.6) | 17 (10.3) |
| | Male (M) | 65 (28.3) | 31 (47.7) | 21 (32.3) | 13 (20.0) |
| Education Background | Undergraduate Level-S1 (H) | 205 (89.1) | 102 (49.8) | 76 (37.1) | 27 (13.2) |
| | Postgraduate Level-S2 (I) | 25 (10.9) | 10 (40.0) | 12 (48.0) | 3 (12.0) |
| | Doctoral Level-S3 (J) | 0 | 0 | 0 | 0 |
| Level of Teaching | Elementary School (R) | 82 (35.7) | 40 (48.8) | 29 (35.4) | 13 (15.9) |
| | Junior Secondary School (S) | 43 (18.7) | 23 (53.5) | 18 (41.9) | 2 (4.7) |
| | Senior Secondary School (T) | 105 (45.7) | 49 (46.7) | 41 (39.0) | 15 (14.3) |

**Table 3. Differences in School Teachers' Academic Writing Creativity and Self-Efficacy Based on Their Academic Writing Experience**

| Item | Code* | DIF Measure | DIF Contrast | t | Probability |
|------|-------|-------------|--------------|------|-------------|
| Q32 | A | -.78 | .67 | 2.28 | .0237 |
|     | B | -1.45 |   |   |   |
| Q18 | B | .47 | .55 | 2.03 | .0438 |
|     | A | -.08 |   |   |   |
| Q30 | B | .47 | .55 | 2.03 | .0437 |
|     | A | -.08 |   |   |   |
| Q4 | B | .34 | .65 | 1.06 | .3032 |
|    | C | -.30 |   |   |   |
| Q28 | C | 1.38 | 1.55 | 3.01 | .0083 |
|     | A | -.17 |   |   |   |
|     | C | 1.38 | 1.31 | 2.47 | .0238 |
|     | B | .08 |   |   |   |

\* None (A), Writing academic texts: 2 – 5 Articles (B), Writing academic texts: > 5 Articles (C)

**Table 4. Differences in School Teachers' Academic Writing Creativity and Self-Efficacy Based on Their Age**

| Item | Code* | DIF Measure | DIF Contrast | t | Probability |
|------|-------|-------------|--------------|------|-------------|
| Q1 | X | 1.05 | 1.12 | 2.76 | .0088 |
|    | Z | -.07 |   |   |   |
|    | Y | 1.05 | 1.12 | 2.76 | .0087 |
|    | Z | -.07 |   |   |   |
| Q2 | X | .82 | .89 | 2.17 | .0356 |
|    | Z | -.07 |   |   |   |
| Q5 | X | .78 | .62 | 2.28 | .0236 |
|    | Y | .17 |   |   |   |
|    | X | .78 | 1.12 | 2.71 | .0097 |
|    | Z | -.34 |   |   |   |
| Q4 | X | .68 | .83 | 3.02 | .0029 |
|    | Y | -.15 |   |   |   |
|    | X | .68 | 1.29 | 3.10 | .0036 |
|    | Z | -.61 |   |   |   |
| Q8 | X | 1.02 | .95 | 2.37 | .0229 |
|    | Z | .06 |   |   |   |
| Q20 | X | .09 | .99 | 2.31 | .0257 |
|     | Z | -.90 |   |   |   |
|     | Y | .25 | 1.14 | 2.68 | .0105 |
|     | Z | -.90 |   |   |   |
| Q9 | Z | -.34 | 1.59 | 3.72 | .0005 |
|    | X | -1.93 |   |   |   |
|    | Z | -.34 | 1.28 | 3.02 | .0042 |
|    | Y | -1.62 |   |   |   |
| Q28 | Z | 1.04 | 1.06 | 2.71 | .0095 |
|     | X | -.03 |   |   |   |
|     | Z | 1.04 | 1.31 | 3.32 | .0018 |
|     | Y | -.27 |   |   |   |
| Q30 | Z | .80 | 1.03 | 2.59 | .0128 |
|     | X | -.23 |   |   |   |

\* < 30 y.o (X), 30-40 y.o (Y), > 50 y.o (Z)

**Table 5. Differences in School Teachers' Academic Writing Creativity and Self-Efficacy Based on Their Gender and Education Background**

| Item | Code* | DIF Measure | DIF Contrast | t | Probability |
|------|-------|-------------|--------------|------|-------------|
| Q1 | F | 1.08 | .62 | 2.23 | .0282 |
| | M | .46 | | | |
| Q13 | H | .31 | .98 | 2.15 | .0400 |
| | I | -.67 | | | |

\* Female (F), Male (M), Undergraduate Level-S1 (H), Postgraduate Level-S2 (I)

**Table 6. Differences in School Teachers' Academic Writing Creativity and Self-Efficacy Based on Their School Level**

| Item | Code* | DIF Measure | DIF Contrast | t | Probability |
|------|-------|-------------|--------------|------|-------------|
| Q16 | R | .70 | .86 | 3.01 | .0030 |
| | T | -.17 | | | |
| | S | .67 | .84 | 2.43 | .0170 |
| | T | -.17 | | | |
| Q15 | R | .99 | .59 | 2.12 | .0352 |
| | T | .40 | | | |
| Q13 | S | .75 | .76 | 2.23 | .0283 |
| | T | -.01 | | | |

\* Elementary School (R), Junior Secondary School (S), Senior Secondary School (T)

The DIF analysis revealed that teachers' responses varied in relation to their demographic background. For example, as shown in Table 3, it was found that teachers who had not written any articles for the past three years were more likely to seek feedback, suggestions, or advice from their colleagues for their academic writing than teachers who had written between two and five articles (see item Q32). Conversely, teachers who had written between two and five articles over the past three years tended to be more capable than those who had not written any articles of composing their original ideas initially in their academic writing, although they had been influenced by the information from the literature (see item Q18). This pattern was also evident in regards to teachers who had written between two and five articles in the past three years being more capable than those who had not of improving the vocabulary suggestions, paraphrases, and grammatical arrangements provided by software or other digital applications (see item Q30). Furthermore, it was found that teachers who had written more than five articles in the past three years were more likely to be adept at using software or other digital applications to amend the spelling, vocabulary and grammar in their academic writing than those who had not written any articles, or had written between two and five articles (see item Q28). Finally, teachers who had written more than five articles over the past three years were more capable than those who had not of expressing their ideas and opinions in their writing that reflected their own distinct identity or individuality (see item Q4).

The differences observed in the participants' age background were also highlighted in Table 4. It was found that teachers aged younger than 30 had less difficulty formulating ideas and themes for their academic writing than those aged 30–40 or older than 50 (see item Q1). It was also evident that, when producing academic texts, teachers aged younger than 30 were more capable of conveying meaning more clearly than those aged over 50 (see item Q2). Additionally, it was determined that teachers in the youngest age group were more proficient at expressing

concepts and terminology in accordance with the scientific field in their writing, compared with those in the 30–40 and over 50 age groups (see item Q5). Furthermore, these younger teachers tended to display a greater ability to embody their individual opinions and insights in their writing than the other age groups (see item Q4). Moreover, teachers who were younger than 30 were more confident than participants who were older than 50 in writing impressive and professional academic texts (see item Q8). It was also found that teachers in the age group of younger than 30 or in their 30s – 40s tended to be more capable of varying the use of academic vocabulary and phrases to make their writing more interesting and less monotonous than participants who were older than 50 (see item Q20). Furthermore, it was observed that teachers who were older than 50 were more considerate when they considered whether the information in their writing was comprehensible to the readers or not, compared to those aged 30 – 40 or younger than 30 (see item Q9). Moreover, it was found that teachers aged older than 50 were more familiar with using software or other digital applications to correct the spelling, vocabulary and grammar in their academic writing than those who were younger than 30 and in their 30s – 40s (see item Q28). Finally, it was found that teachers aged older than 50 were more capable of making improvements in the vocabulary suggestions, paraphrases, and grammatical arrangements provided by software or other digital applications than those who were younger than 30 (see item Q30).

Moreover, the differences in the responses of teachers according to their gender and educational background were evident from Table 5. It was found that female teachers were more adept at deriving ideas and themes for their academic writing than their male counterparts, and those with a bachelor's degree were more aware of various websites or journal search engines and databases for references to support their academic writing than those with a master's degree.

Furthermore, statistically significant differences were shown in teachers' responses in relation to their school level background. As Table 6 demonstrates, respondents who taught in senior secondary schools were less capable of synthesizing information from multiple sources of literature to build ideas and arguments in academic texts than those teaching in elementary and junior secondary schools (see item Q16). It was also found that teachers teaching elementary school students were more adept at using digital reference management applications to store and manage the articles they have cited in its database than those teaching in senior secondary school (see item Q15). Moreover, teachers teaching junior secondary school students were more aware of various websites or journal search engines and databases for references to support their academic writing than those teaching in senior secondary schools.

**DISCUSSION**

Despite the presence of the Regulation of the Ministry of State Apparatus Empowerment and Bureaucratic Reform of the Republic of Indonesia No. 16 on the requirement of publication for teachers since 2009 (KemenPan-RB, 2009), the implementation and strict monitoring of this regulation in the past five years have been a cause of concern for many Indonesian teachers who want to become more advanced in their teaching careers. In response to this regulation, various Indonesian universities, government education bodies, and private institutions have collaborated to run workshops that help teachers to carry out classroom action research, as well as publishing the results in peer-reviewed journals. During the course of 2022 solely, the extant literature published in national journals and databases has highlighted the effort to further develop teachers' classroom action research competencies and manuscript writing from the completed research

reports. However, there has been little discussion regarding the degree of creativity and efficacy with which teachers write in an academic context. The literature about Indonesian teachers' classroom action research and academic writing for the publication of research reports has likely lacked sufficient evidence and thorough discourse to enable readers to accurately assess the effectiveness of the teacher training and workshops conducted. To address this issue, the current survey study investigated the academic writing creativity and self-efficacy among Indonesian school teachers, for which the data from 262 Indonesian teachers in Jakarta, Bogor, Depok, Tangerang and Bekasi were collected and evaluated using Rasch statistical analysis.

The findings of the current study revealed that almost half of the participants (N=112, or 48.7%) had a limited level of self-efficacy and creativity in writing an academic text, with some displaying a moderate level (N=88, or 38.3%), and few displaying a high level (N=30, or 13%). It was evident that school teachers seemed to lack the necessary level of academic writing competence, creativity and their ability in utilising technology to support academic writing activities. This lack of competences constrained them from finding ideas or topics and expressing them properly in their academic writing. Notably, the teachers' lack of academic writing creativity and self-efficacy was observed across all of the various demographic backgrounds, many of which were found to have statistically different perceptions.

The findings of the current study correspond with those from Mulyono et al. (in review), who examined similar issues of academic writing creativity and self-efficacy in the context of technical and vocational education and training (TVET) instructors. Although their cohort was small, their findings remain similar to those of the current study and the discussion adds value to the understanding of the potential causes of a lack of academic writing creativity and self-efficacy in school teachers. These included a lack of motivation and opportunities to write after undergraduate study, as demographic data revealed that more than half of the teacher participants had not written or produced any academic text since then. Additionally, the orientation and curriculum of academic writing courses during the undergraduate studies and the teacher's engagement with the academic writing process during their course may also contribute to the issue. The study by Mulyono and Artarini (2021) has highlighted the role of genre-based academic writing courses, along with intensive monitoring and academic writing practice, in enhancing the quality of written academic texts.

## CONCLUSION

In summary, the current study has demonstrated that school teachers possess an inadequate level of academic writing creativity and self-efficacy, which prevents them from producing and disseminating quality academic writing. Furthermore, the current research has revealed that the school teachers' inadequate level of academic writing creativity and self-efficacy vary significantly according to their demographic backgrounds. Consequently, the findings of the current study urge the need for intensive academic training for schoolteachers that could help them develop their academic writing creativity and self-efficacy. While academic writing is considered complex, an academic writing training programme with a strong emphasis on the application of an academic-genre-based approach is strongly recommended, and teachers' commitment to participate in any academic writing educational course should be included in their professional development agenda. It is important to acknowledge that the present study employed a self-administered questionnaire, which may introduce subjectivity and biases. Moreover, the decision to adopt a non-probability

sampling with a convenient approach could lead to further issues of generalisation. Therefore, it should be highlighted that the findings of the present study were restricted to the context of the 262 schoolteachers who participated in the study, and therefore, cannot be generalised to the wider population. Future research into a similar field is encouraged to address the limitation of the present study.

## ACKNOWLEDGEMENT

## REFERENCES

Ackerman, T. A. (1994). Using multidimensional Item Response Theory to understand what items and tests are measuring. *Applied Measurement in Education*, *7*(4), 255–278. https://doi.org/10.1207/s15324818ame0704_1

Allison, D. (2004). Creativity, students' academic writing, and EAP: exploring comments on writing in an English language degree programme. *Journal of English for Academic Purposes*, *3*(3), 191–209. https://doi.org/10.1016/j.jeap.2003.11.005

Ansarifar, A., Shahriari, H., & Pishghadam, R. (2018). Phrasal complexity in academic writing: A comparison of abstracts written by graduate students and expert writers in applied linguistics. *Journal of English for Academic Purposes*, *31*, 58–71. https://doi.org/10.1016/j.jeap.2017.12.008

Antara, I. M. A. R., Sedeng, I. N., & Putra, P. A. A. (2016). Keterampilan menulis wacana argumentasi Berbahasa Inggris dengan Metode ESA (Engage, Study, Active) pada Mahasiswa level post-Intermediete di STIE Tratmia Mulya. *Linguistika*, *23*(44), 37–43.

Arono, & Arsyad, S. (2019). The effect of genre-based mentoring on rhetorical quality of research article drafts by Indonesian lecturers in social sciences and humanities. *International Journal of Instruction*, *12*(3), 33–50. https://www.e-iji.net/dosyalar/iji_2019_3_3.pdf

Arsyad, S., & Arono. (2016). Potential problematic rhetorical style transfer from first language to foreign language: a case of Indonesian authors writing research article introductions in English. *Journal of Multicultural Discourses*, *11*(3), 315–330. https://doi.org/10.1080/17447143.2016.1153642

Arsyad, S., Ramadhan, S., & Maisarah, I. (2020). The rhetorical problems experienced by Indonesian lecturers in social sciences and humanities in writing research articles for international journals. *The Asian Journal of Applied Linguistics*, *7*(1), 116–129.

Chan, M., & Subramaniam, R. (2020). Validation of a science concept inventory by Rasch analysis. In M. S. Khine (Ed.), *Rasch Measurement: Applications in Quantitative Educational Research* (Issue July, pp. 159–178). Springer Singapore. https://doi.org/10.1007/978-981-15-1800-3_9

Colledani, D., Anselmi, P., & Robusto, E. (2020). Rasch models in the analysis of repgrid data. *Journal of Constructivist Psychology*, *33*, 1–21. https://doi.org/10.1080/10720537.2020.1852461

Ekawati, A. D., Mulyono, H., Arrummaiza, V. S., Zulaiha, S., & Ningsih, S. K. (2021). Evaluating EFL teachers' self-efficacy and attitude towards web-based professional development practices: A Rasch analysis. *TESOL International Journal*, *16*(6.1), 124–141.

Evans, K. (2013). *Pathways through writing blocks in the academic environment*. Sense Publishers. https://doi.org/10.1007/978-94-6209-242-6

Flowerdew, J., & Habibie, P. (2022). *Introducing English for research publication purposes*. Routledge.

Husin, M. S., & Nurbayani, E. (2017). The Ability of Indonesian EFL learners in writing academic papers. *Dinamika Ilmu*, *17*(2), 237–250.

KemenPan-RB. (2009). *Peraturan Menteri Pendayagunaan Aparatur Negara dan Reformasi Birokrasi nomor 16 tentang jabatan fungsional guru dan angka kreditnya*. Kementerian Pendayagunaan Aparatur Negara dan Reformasi Birokrasi, Republik Indonesia.

Kristiawan, M., Nipriansyah, N., Yanti, F. A., & Viona, E. (2022). Penulisan dan publikasi penelitian tindakan kelas bagi guru. *Jurnal Basicedu*, *6*(1), 95–101.

Li, Y., & Flowerdew, J. (2020). Teaching English for Research Publication Purposes (ERPP): A review of language teachers' pedagogical initiatives. *English for Specific Purposes*, *59*, 29–41. https://doi.org/10.1016/j.esp.2020.03.002

Li, Y., Flowerdew, J., & Cargill, M. (2018). Teaching English for Research Publication Purposes to science students in China: A case study of an experienced teacher in the classroom. *Journal of English for Academic Purposes*, *35*, 116–129. https://doi.org/10.1016/j.jeap.2018.07.006

Luji, D. S., Tari, E., Syahputra, A. W., & Taneo, J. (2022). Pendampingan penulisan artikel penelitian tindakan kelas di Sabu Raijua. *Dinamisia: Jurnal Pengabdian Kepada Masyarakat*, *6*(5), 1155–1159.

Maamuujav, U., Olson, C. B., & Chung, H. (2021). Syntactic and lexical features of adolescent L2 students' academic writing. *Journal of Second Language Writing*, *53*, 100822. https://doi.org/10.1016/j.jslw.2021.100822

Mitchell, K. M., McMillan, D. E., Lobchuk, M. M., Nickel, N. C., Rabbani, R., & Li, J. (2021). Development and validation of the Situated Academic Writing Self-Efficacy Scale (SAWSES). *Assessing Writing*, *48*, 100524. https://doi.org/10.1016/j.asw.2021.100524

Mulyono, H., & Artarini, S. (2021). Direct and indirect supports in an EFL academic writing classroom: New rehtorical genre perspective. *MEXTESOL Journal*, *45*(4), 1–6. http://mextesol.net/journal/index.php?page=journal&id_article=26511

Mulyono, H., Ningsih, S. K., Fausia, F., & Setiawan, H. (n.d.). *Developing an academic writing creativity and self-efficacy among TVET instructors: Evaluating an online genre analysis-based academic writing workshop*.

Mulyono, H., Ningsih, S. K., & Raufi, B. S. (2023). Validating the academic writing creativity and self-efficacy Scale: A Rasch Model analysis. *Indonesian Research Journal in Education |*, *7*(1), 121–135. https://doi.org/10.22437/irje.v7i1.24789

Mulyono, H., Saskia, R., Arrummaiza, V. S., & Suryoputro, G. (2020). Psychometric assessment of an instrument evaluating the effects of affective variables on students' WTC in face-to-

face and digital environment. *Cogent Psychology*, *7*(1), 1823617. https://doi.org/10.1080/23311908.2020.1823617

Mulyono, H., & Suryoputro, G. (2020). The use of social media platform to promote authentic learning environment in hgiher education setting. *Science for Education Today*, *10*(2), 105–123. https://doi.org/10.15293/2658-6762.2002.07

Ningsih, S. K., Mulyono, H., Ar Rahmah, R., & Fitriani, N. A. (2021). A Rasch-based validation of EFL teachers' received online social support scale. *Cogent Education*, *8*(1), 1957529. https://doi.org/10.1080/2331186X.2021.1957529

Sanjaya, I. N. S., Sitawati, A. A. R., & Suciani, N. K. (2015). Comparing hedges used by English and Indonesian scholars in published research articles: A corpus-based study. *TEFLIN Journal Journal*, *26*(2), 209–227.

Siburian, J., Sadikin, A., & Hamidah, A. (2022). Penelitian tindakan kelas: Sebuah kewajiban bagi guru. *Jurnal JUPEMA*, *1*(1), 35–40.

Teng, M. F., & Wang, C. (2023). Assessing academic writing self-efficacy belief and writing performance in a foreign language context. *Foreign Language Annals*, *56*, 144–169. https://doi.org/10.1111/flan.12638

Zulaiha, S., & Mulyono, H. (2020). Exploring junior high school EFL teachers' training needs of assessment literacy. *Cogent Education*, *7*(1), 1772943. https://doi.org/10.1080/2331186X.2020.1772943