Data Article

Students’ self-regulated learning (SRL) profile dataset measured during Covid-19 mitigation in Yogyakarta, Indonesia

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\textbf{A R T I C L E   I N F O}

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\textbf{Article history:} & \textbf{A B S T R A C T} \\
Received 10 June 2020 & The Covid-19 pandemic has made changes in various sectors of life in Indonesia, including education. The Indonesian Ministry of Education and Culture issued a policy for the implementation of online learning. One of the factors that determine the success of online learning is the level of student self-regulated learning. Thus understanding the capabilities of SRL is essential for achieving successful education during this pandemic. This article presents data that explore the profiles of self-regulated learning in 1st-grade to 12th-grade students. Four aspects of self-regulated learning include planning, monitoring, controlling, and reflecting. Data retrieval is related to predictions of online learning success during Covid-19 mitigation. The sample consisted of 6571 students. The questionnaire was distributed to 61 schools (37 primary schools, 12 junior high schools, and 12 senior high schools) with an online survey in Yogyakarta, Indonesia. The questionnaire was prepared in an online format using Google Form. This link was presented with an introductory sentence from the researcher and distributed to students through the respective principal. Students may only fill in a questionnaire once but were allowed to make changes in response. The collected data were selected to be valid and reliable using the Rasch model. Some data released are items

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that are not filled in, extremely low or high data. These data can be further processed with various statistical techniques such as Two-way, ANOVA, MANOVA, or Cluster Analysis following the intended in-depth analysis needs. The data will be useful for researchers, educational decision-makers, and education managers to improve online learning services and implementation that enhance student learning achievement.

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### Specifications Table

| Subject          | Education       |
|------------------|-----------------|
| Specific subject area | Educational Psychology, especially on self-regulated learning profiles |
| Type of data     | Table           |
| How the data were acquired | Survey with an online questionnaire (see Table 2) |
| Data format      | Raw Analyzed    |
| Parameters for data collection | Students from 1st-grade 1 to 12th-grade participating in online learning during Covid-19 mitigation at Muhammadiyah schools in Yogyakarta, Indonesia. |
| Description of data collection | The questionnaire was for obtaining aspects of the SRL (planning: 5 items, monitoring: 6 items, controlling: 6 items, and reflecting: 5 items) of the students from 1st-grade to 12th-grade. The statements were in the form of positive and negative statements using a Likert scale ranging from score 1 (strongly disagree) to 5 (strongly agree). The questionnaire was prepared in an online format using Google Form. This questionnaire link was presented with an introductory sentence from the researcher and was distributed to students through the respective principal. Students may only fill in a questionnaire once but were allowed to make changes in response. The collected data were selected to be valid and reliable using the Rasch model. Some data released are items that are not filled in, extremely low or high data. The data collection permit was obtained from the Basic and Secondary Education Assembly, Regional Leader of Muhammadiyah, Yogyakarta City. The data were taken in the period 18–25 March 2020. |
| Location source data | Institution: Muhammadiyah Schools City: Yogyakarta Country: Indonesia |
|                   | Latitude and longitude for collected samples/data: (-7.803164, 110.3398253) |
|                   | https://goo.gl/maps/Ps6HtDxJySaax5G4A |
| Accessibility data | Repository name: http://eprints.uad.ac.id/ Data identification number: - Direct URL to data: http://eprints.uad.ac.id/18871/1/Supplementary%20Data.xlsx (Supplementary data) |

### Value of the Data

- This data are useful to understand students’ SRL profiles as a basis for predicting learning success.
- More specifically, these data can be useful for predicting online learning success during Covid-19 mitigation.
- Other researcher can process this data with various statistical techniques such as Two-way, ANOVA, MANOVA, or Cluster Analysis following the intended in-depth analysis needs.
- The data will be useful for researchers, educational decision-makers, and education managers to improve online learning services and implementation that enhance student learning achievement.
• The method used in collecting these data can be replicated in other regions and make SRL comparisons between them.

1. Data Description

This dataset contains SRL data on four factors (Planning, Monitoring, Controlling, and Reflecting) with the item structure, as presented in Table 2. Item details for each factor are shown in Table 3. Based on these items, a questionnaire was developed to measure the SRL. The questionnaire was distributed to 61 schools (37 primary schools, 12 junior high schools, and 12 senior high schools) with an online survey. The raw data obtained from student responses can be seen in Table 1S (See: Supplementary Data). In Table 1S, all scores have considered negative statements.

Furthermore, these data were processed by the Rasch Model; they were displayed in Table 2S (See: Supplementary Data). From this analysis, data fit (Table 3S) was obtained, it can be used for various purposes (See: Supplementary Data). The primary processing done calculates the Mean, Standard Deviation for each aspect of Self-regulated learning (Table 4S; See: Supplementary Data). The extract is in Table 1, representing the descriptive of SRL aspects. Each item of the questionnaire's detailed response is provided as a supplementary file (see the link as mentioned in the 'Accessibility data' section).

2. Experimental Design, Materials and Methods

This data gathering was ex-post facto design. The data were taken by a survey using an SRL questionnaire. The SRL model used refers to [1] with a questionnaire structure like Table 2.

Table 3 shows the statement of each factor. Each statement of the questionnaire items was adapted from [1]. This questionnaire was translated into Indonesian and validated before used.

| Table 1 | Descriptive of SRL aspects. |
|---------|-----------------------------|
| Items   | Strongly Disagree (1) | Disagree (2) | Neutral (3) | Agree (4) | Strongly Agree (5) | Mean | Standard Deviation | N  |
| P1      | 68                        | 146          | 682         | 1094       | 1866          | 4.178431 | 0.966953             | 3874 |
| P2      | 120                       | 301          | 972         | 1124       | 1352          | 3.849574 | 1.080357             | 3874 |
| P3      | 59                        | 141          | 624         | 1073       | 1965          | 4.228384 | 0.948257             | 3874 |
| P4      | 168                       | 408          | 1053        | 1118       | 1117          | 3.674935 | 1.125455             | 3874 |
| P5      | 473                       | 721          | 1137        | 907        | 623           | 3.125888 | 1.239552             | 3874 |
| M1      | 94                        | 248          | 990         | 1289       | 1239          | 3.862943 | 1.015565             | 3874 |
| M2      | 139                       | 250          | 878         | 1272       | 1317          | 3.876056 | 1.064259             | 3874 |
| M3      | 76                        | 235          | 1019        | 1238       | 1288          | 3.888751 | 1.001325             | 3874 |
| M4      | 144                       | 301          | 901         | 1286       | 1230          | 3.81746  | 1.078186             | 3874 |
| M5      | 695                       | 888          | 1081        | 634        | 561           | 2.864713 | 1.293032             | 3874 |
| M6      | 402                       | 632          | 1061        | 930        | 836           | 3.301988 | 1.261341             | 3874 |
| C1      | 72                        | 178          | 865         | 1258       | 1484          | 4.012176 | 0.978523             | 3874 |
| C2      | 107                       | 204          | 914         | 1200       | 1436          | 3.946399 | 1.031132             | 3874 |
| C3      | 34                        | 86           | 638         | 1149       | 1953          | 4.26966  | 0.87426              | 3874 |
| C4      | 29                        | 74           | 423         | 1059       | 2277          | 4.419215 | 0.81591              | 3874 |
| C5      | 876                       | 967          | 1098        | 581        | 341           | 2.623082 | 1.230814             | 3874 |
| C6      | 294                       | 378          | 690         | 861        | 1639          | 3.82159  | 1.28187              | 3874 |
| R1      | 48                        | 163          | 997         | 1422       | 1234          | 3.939701 | 0.9232              | 3874 |
| R2      | 53                        | 121          | 454         | 913        | 2326          | 4.380398 | 0.906333             | 3874 |
| R3      | 55                        | 151          | 966         | 1309       | 1382          | 3.986807 | 0.94331              | 3874 |
| R4      | 47                        | 90           | 444         | 983        | 2301          | 4.397419 | 0.867935             | 3874 |
| R5      | 214                       | 263          | 612         | 853        | 1926          | 4.037749 | 1.19281              | 3874 |
Table 2
Questionnaire structure.

| No | Factors       | Positive Statements | Negative Statements | Total |
|----|---------------|---------------------|---------------------|-------|
| 1  | Planning      | 1, 2, 3, 4          | 5                   | 5     |
| 2  | Monitoring    | 6, 7, 8, 9, 10      | 11                  | 6     |
| 3  | Controlling   | 12, 13, 14, 15      | 16, 17              | 6     |
| 4  | Reflecting    | 18, 19, 20, 21      | 22                  | 5     |

Table 3
Items of the questionnaire.

| General statements                                                                 | Item Code |
|-----------------------------------------------------------------------------------|-----------|
| Plan                                                                              | P1        |
| 1. I plan out projects that I want to complete.                                   |           |
| 2. If an important test is coming up, I created a study plan.                    | P2        |
| 3. Before I do something fun, I consider all the things that I need to get done. | P3        |
| 4. I can usually estimate how much time my homework will take to complete.      | P4        |
| 5. I have trouble making plans to help me reach my goals. (N)                     | P5        |
| Monitor                                                                           | M1        |
| 6. I keep track of how my projects are going.                                     |           |
| 7. I know when I’m behind on a project.                                           | M2        |
| 8. I track my progress in reaching my goals.                                      | M3        |
| 9. I know what my grades are at any given time.                                   | M4        |
| 10. Daily, I identify things I need to get done and track what gets done.       | M5        |
| 11. I have trouble remembering all the things I need to accomplish. (N)          | M6        |
| Control                                                                           |           |
| 12. I do what it takes to get my homework done on time.                           | C1        |
| 13. I make choices to help me succeed, even when they aren’t the most fun right now. | C2        |
| 14. As soon as I see things aren’t going right, I want to do something about it. | C3        |
| 15. I keep trying as many different possibilities as necessary to succeed.       | C4        |
| 16. I have difficulty maintaining my focus on projects that take a long time to complete. (N) | C5        |
| 17. When I get behind on my work, I often give up. (N)                            | C6        |
| Reflect                                                                           |           |
| 18. I think about how well I’m doing on my assignments.                           | R1        |
| 19. I feel a sense of accomplishment when I get everything done on time.         | R2        |
| 20. I think about how well I’ve done in the past when I set new goals.           | R3        |
| 21. When I fail at something, I try to learn from my mistake.                    | R4        |
| 22. I keep making the same mistake over and over again. (N)                      | R5        |

The method for obtaining data that fit is using the Rasch model [2,3]. Some fit indexes provided in the Rasch analysis are ZSTD Person Infit, ZSTD Person Outfit, MNSQ Infit Person, MNSQ Person Outfit, ZSTD Infit Item, ZSTD Outfit Item, MNSQ Infit Item, MNSQ Outfit Item [2]. The data from the raw data (Table S1; look at supplementary data) were processed using the WINSTEP 3.73 application to obtain pertinent data. The data were processed with the Rasch model (Table S2; Look at supplementary data). From 6613 out of total respondents were analyzed. This action was conducted because 46 respondents filled in their identity but did not fill in the questionnaire. Therefore, there were 6659 – 46 = 6613 respondents only (see Table S2, Supplementary Data), the respondents who met the criteria.

1. Outfit Mean Square (MNSQ) received: 0.5 <MNSQ <1.5
2. Z-Standard Outfit (ZSTD) value received: −2.0 <ZSTD <+2.0
3. Outfit Point Value Correlation (Pt Mean Corr) Value: 0.4 <Pt Measure Corr <0.85.

So if fit data are collected, there are 3874 fit total respondents. The rest of the respondents who did not fit were 2785 people consisting of 42 people indicated as outliers (40 people from the maximum extreme score group and two people from the minimum extreme score group),
46 people were indicated not filling in the questionnaire. However, they had identities, and 2697 entered the most misfitting responses and the most unexpected responses.

**Ethics Statement**

Before the participant filled in the questionnaire, he/she had to give his/her informed consent. If he/she did not provide it, he/she would automatically leave from the application. Therefore, all the datasets were obtained with the proper procedure, including the participant's informed consent.

**Declaration of Competing Interest**

The authors declare that they have no conflict of interest that could influence this work.

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**Supplementary Materials**

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.dib.2020.106422.

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