HATTIE'S VISIBLE LEARNING EVALUATION MODEL IN LEARNING STRATEGIES AND PUBLICATION OF SCIENTIFIC WORK OF IKIP SILIWANGI STUDENTS

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ABSTRACT

This research aims to evaluate the application of the Hattie's Visible Learning Evaluation Model in strategy learning and the publication of scientific work at IKIP Siliwangi. Using quantitative and qualitative data analysis methods, this research analyze student responses to sixty aspects of assessment that cover various learning elements. The results of the research identified the aspects with the highest and lowest scores from each study program, namely Guidance and Counselling (BK) and Indonesian Language and Literature Education (PBSI). These results provide in-depth insight regarding significant factors in developing effective learning strategies and supporting the publication of student scientific work such as humor, teaching strategies teacher, credibility outdoor/adventure programmes, lecturer effect, lecturer subject matter knowledge, questioning, religious campus, feedback personality, mentoring computer-assisted instruction, lecturer-students relationships, drama/art programs, study skills, extra-curricular programs, and classroom discussion. Meanwhile, less effective factors are of concern, such as parental involvement, students control over learning, boredom, gender, use of calculators, changing school calendar, lack of sleep, moving between schools, mathematics, drugs, pre-term birth weight, ability grouping, not labeling students, ability grouping for gifted students. The implications of this research finding can be the basis for improving more optimal learning strategies in higher education environments, especially IKIP Siliwangi.

Keywords: Evaluation, Hattie's Visible Learning Model, Publication of Scientific Papers

ABSTRAK

Penelitian ini bertujuan untuk mengevaluasi penerapan Model Evaluasi Hattie's Visible Learning pada pembelajaran strategi dan publikasi karya ilmiah di Institut Keguruan dan Ilmu Pendidikan (IKIP) Siliwangi. Dengan menggunakan analisis data kuantitatif dan kualitatif, penelitian ini menganalisis tanggapan mahasiswa terhadap enam puluh aspek penilaian yang mencakup berbagai elemen pembelajaran. Hasil penelitian mengidentifikasi aspek-aspek dengan nilai tertinggi dan terendah dari masing-masing program studi, yaitu Bimbingan dan Konseling (BK) serta Pendidikan Bahasa dan Sastra Indonesia (PBSI). Hasil ini memberikan wawasan mendalam terkait faktor-faktor yang signifikan dalam pengembangan strategi pembelajaran yang efektif dan mendukung publikasi karya ilmiah mahasiswa seperti humor, teaching strategies teacher, credibility outdoor/adventure programmes, lecturer effect, lecturer subject matter knowledge, questioning, religious campus, feedback personality, mentoring computer-assisted instruction, lecturer-students relationships, drama/art programs, study skills, extra-curricular programs, dan classroom discussion. Tetapi yang menjadi perhatian faktor yang kurang efektif seperti parental involvement, students control over learning, boredom, gender, use of calculator, changing school calendar, lack of sleep, moving between schools, mathematics, drugs, pre-term birth weight, ability grouping, not labeling students, ability grouping for gifted students. Implikasi temuan penelitian ini dapat menjadi dasar untuk perbaikan strategi pembelajaran yang lebih optimal di lingkungan pendidikan tinggi khususnya IKIP Siliwangi.

Kata Kunci: Evaluasi, Hattie's Visible Learning Model, Publikasi Karya Ilmiah
INTRODUCTION

Evaluation is an important component in education that aims to measure and understand the impact of learning and identify areas of improvement (Supriyadi, 2013; Lipsch-Wijnen & Dirkx, 2022). Assessment is an integral part of the educational process that helps institutions ensure the quality of learning provided to students. In recent decades, there has been rapid development in the field of educational evaluation, especially in terms of the use of empirical evidence to measure the impact of learning. One evaluation model that is increasingly well known is "Hattie's Visible Learning" (Terhart, 2011; Devi et al., 2022).

This model is based on the research of John Hattie, an education expert from New Zealand. Hattie's Visible Learning uses meta-analysis methods to identify the factors that most influence learning outcomes. This model aims to measure the impact of various factors, strategies and learning practices on increasing student achievement (Moulds, 2021, Ramakrishna & Lalitha, 2023).

IKIP Siliwangi is a higher education institution that is committed to improving the quality of student learning. In this context, the implementation of Hattie's Visible Learning evaluation model can provide valuable insights into the factors that most influence learning (Hattie, 2008, Hattie., J. & Ziere., 2019, Nielsen & Klitmøller, 2021, Lipsch-Wijnen & Dirkx, 2022). Effective learning strategies and publication of scientific papers are two very important aspects in the higher education process. Good learning strategies help increase student understanding and achievement, while the publication of scientific papers is a way to contribute to knowledge and scientific development (Khulzannah, 2018, Sabela & Roesdiana, 2022, Budiantoro et al., 2023).

This research aims to explore the potential for using the Hattie's Visible Learning evaluation model in the context of strategy learning and scientific work publication on the IKIP Siliwangi campus. Using this model, researchers identified the most influential factors in improving teaching in learning strategy courses and the publication of scientific papers. Therefore, the results of this research can provide information and academic contributions that are useful for lecturers' decision making in increasing the effectiveness of student scientific work learning at the IKIP Siliwangi campus.

METHOD

This research uses a mixed research design (mixed-methods research) which combines quantitative and qualitative approaches. This design allows a more comprehensive analysis to
be carried out on the impact of the Hattie’s Visible Learning evaluation model in strategy learning and the publication of scientific papers. The population and sample of this research are students at the IKIP Siliwangi campus with a sample of two appropriate study programs that teach learning strategy courses and publication of scientific papers. The two study programs in question are Bachelor of Education in Indonesian language and literature (PBSI) and Bachelor of Counseling Guidance (BK). The total number of students is 140 from two study programs, 67 (BK) and 60 (PBSI), namely two classes from the PBSI study program and two classes from the BK study program. Data collection for this research used a questionnaire on a scale of 4 (very effective), 3 (effective), 2 (less effective), 1 (not effective). Qualitative data analysis in this research uses the Mile & Humberman model, namely data collection, data reduction, data presentation, conclusions or data verification and analysis. Data processing uses Microsoft Excel 2019 and comparison of 4 interval scores as follows.

<table>
<thead>
<tr>
<th>INTERVAL</th>
<th>VALUE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<td>1.66</td>
<td>2.65</td>
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<tr>
<td>1</td>
<td>1.00</td>
<td>1.65</td>
</tr>
</tbody>
</table>

**RESULT AND DISCUSSION**

**Result**

a) Student Questionnaire Results for the Guidance and Counselling Study Program

In Hattie's Visible Learning evaluation model of strategy learning and scientific work publications in the Guidance and Counseling Study Program at IKIP Siliwangi, these aspects are assessed based on their relative impact on learning. The results can be seen from the total value given to each aspect. The following are several aspects that have a very effective impact on learning, marked by high score responses including (1) Humor 3.87; (2) Personality 3.85,
(3) Mentoring 3.82; (4) Lecturer-Students Relationships 3.77; (5) Computer-assisted Instruction 3.77; (6) Lecturer Subject Matter Knowledge 3.73; (7) Study Skills 3.72; (8) Drama/Art Programs 3.72; (9) Classroom Discussion 3.70; (10) Extra-curricular Programs 3.70.

In contrast, several aspects of learning evaluation with a lower impact on student responses include (1) Changing School Calendar 2.51; (2) Lack of Sleep 2.51; (3) Moving Between Schools 2.51; (4) Mathematics 2.59; (5) Drugs 2.62; (6) Pre-term Birth Weight 2.63; (7) Boredom 2.63; (8) Ability Grouping 2.67; (9) Not Labeling Students 2.68; (10) Ability Grouping for Gifted Students 2.71.

b) Results of Student Questionnaire for Indonesian Language and Literature Education Study Program

In Hattie's Visible Learning evaluation model of strategy learning and scientific work publication in the Indonesian Language and Literature Education Study Program IKIP Siliwangi, some aspects have a relatively higher impact, while others have a lower impact. The following are several aspects with high impact, indicated by a higher total score (1) Humor 3.72; (2) Teaching Strategies 3.72; (3) Lecturer Subject Matter Knowledge 3.70; (4) Lecturer Effect 3.70; (5) Outdoor/Adventure Programs 3.70; (6) Teacher Credibility 3.70; (7) Religious Campus 3.68; (8) Questioning 3.68; (9) Personality 3.67; (10) Feedback 3.67.

Meanwhile, several evaluations of aspects of learning with lower impact include (1) Parental Involvement 2.09; (2) Changing School Calendar 2.15; (3) Mathematics 2.16; (4) Lack of Sleep 2.24; (5) Pre-term Birth Weight 2.54; (6) Students Control Over Learning 2.55; (7) Boredom 2.57; (8) Moving Between Schools 2.66; (9) Gender 2.93; (10) Use of Calculator 2.69.

Below are presented the results of sixty aspects of the assessment carried out and ten aspects taken, both aspects with the highest and lowest scores from each study program.
**Table 2** Highest responses to evaluation aspects of strategic learning and scientifically rich publications

<table>
<thead>
<tr>
<th>NO</th>
<th>Aspects evaluated</th>
<th>Total Evaluation</th>
<th>Study Program</th>
<th>Aspects evaluated</th>
<th>Total Evaluation</th>
<th>Study Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Humor</td>
<td>3.77</td>
<td>PBSI</td>
<td>Humor</td>
<td>3.87</td>
<td>BK</td>
</tr>
<tr>
<td>2</td>
<td>Teaching Strategies</td>
<td>3.72</td>
<td>PBSI</td>
<td>Personality</td>
<td>3.85</td>
<td>BK</td>
</tr>
<tr>
<td>3</td>
<td>Lecturer Credibility</td>
<td>3.70</td>
<td>PBSI</td>
<td>Mentoring</td>
<td>3.82</td>
<td>BK</td>
</tr>
<tr>
<td>4</td>
<td>Outdoor/Adventure Programmes</td>
<td>3.70</td>
<td>PBSI</td>
<td>Computer-assisted Instruction</td>
<td>3.77</td>
<td>BK</td>
</tr>
<tr>
<td>5</td>
<td>Lecturer Effect</td>
<td>3.70</td>
<td>PBSI</td>
<td>Lecturer-Students Relationships</td>
<td>3.77</td>
<td>BK</td>
</tr>
<tr>
<td>6</td>
<td>Lecturer Subject Matter Knowledge</td>
<td>3.70</td>
<td>PBSI</td>
<td>Lecturer Subject Matter Knowledge</td>
<td>3.73</td>
<td>BK</td>
</tr>
<tr>
<td>7</td>
<td>Questioning</td>
<td>3.68</td>
<td>PBSI</td>
<td>Drama/Art Programs</td>
<td>3.72</td>
<td>BK</td>
</tr>
<tr>
<td>8</td>
<td>Religious Campus</td>
<td>3.68</td>
<td>PBSI</td>
<td>Study Skills</td>
<td>3.72</td>
<td>BK</td>
</tr>
<tr>
<td>9</td>
<td>Feedback</td>
<td>3.67</td>
<td>PBSI</td>
<td>Extra-curricular Programs</td>
<td>3.70</td>
<td>BK</td>
</tr>
<tr>
<td>10</td>
<td>Personality</td>
<td>3.67</td>
<td>PBSI</td>
<td>Classroom Discussion</td>
<td>3.70</td>
<td>BK</td>
</tr>
</tbody>
</table>

*BK: Guidance and Counseling  
PBSI: Indonesian Language and Literature Education

**Table 3** Lowest responses to evaluation aspects of strategic learning and scientifically rich publications

<table>
<thead>
<tr>
<th>NO</th>
<th>Aspects evaluated</th>
<th>Total Evaluation</th>
<th>Study Program</th>
<th>Aspects evaluated</th>
<th>Total Evaluation</th>
<th>Study Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Parental Involvement</td>
<td>2.09</td>
<td>PBSI</td>
<td>Changing School Calendar</td>
<td>2.51</td>
<td>BK</td>
</tr>
<tr>
<td>2</td>
<td>Changing School Calendar</td>
<td>2.15</td>
<td>PBSI</td>
<td>Lack of Sleep</td>
<td>2.51</td>
<td>BK</td>
</tr>
<tr>
<td>3</td>
<td>Mathematics</td>
<td>2.16</td>
<td>PBSI</td>
<td>Moving Between Schools</td>
<td>2.51</td>
<td>BK</td>
</tr>
<tr>
<td>4</td>
<td>Lack of Sleep</td>
<td>2.24</td>
<td>PBSI</td>
<td>Mathematics</td>
<td>2.59</td>
<td>BK</td>
</tr>
<tr>
<td>5</td>
<td>Pre-term Birth Weight</td>
<td>2.54</td>
<td>PBSI</td>
<td>Drugs</td>
<td>2.62</td>
<td>BK</td>
</tr>
<tr>
<td>6</td>
<td>Students Control Over Learning</td>
<td>2.55</td>
<td>PBSI</td>
<td>Pre-term Birth Weight</td>
<td>2.63</td>
<td>BK</td>
</tr>
<tr>
<td>7</td>
<td>Boredom</td>
<td>2.57</td>
<td>PBSI</td>
<td>Boredom</td>
<td>2.63</td>
<td>BK</td>
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<tr>
<td>8</td>
<td>Moving Between Schools</td>
<td>2.66</td>
<td>PBSI</td>
<td>Ability Grouping</td>
<td>2.67</td>
<td>BK</td>
</tr>
<tr>
<td>9</td>
<td>Gender</td>
<td>2.93</td>
<td>PBSI</td>
<td>Not Labeling Students</td>
<td>2.68</td>
<td>BK</td>
</tr>
<tr>
<td>10</td>
<td>Use of Calculator</td>
<td>2.96</td>
<td>PBSI</td>
<td>Ability Grouping for Gifted Students</td>
<td>2.71</td>
<td>BK</td>
</tr>
</tbody>
</table>

Discussion

Model evaluasi Hattie's Visible Learning pada pembelajaran strategi dan publikasi karya ilmiah di Program Studi BK serta Program Studi PBSI di IKIP Siliwangi memberikan penilaian terhadap berbagai aspek. Dalam daftar aspek yang dinilai memiliki total nilai yang beragam, menunjukkan tingkat dampak yang berbeda terhadap pembelajaran. Aspek dengan nilai tertinggi yang adalah Humor, Teaching Strategies Teacher, Credibility Outdoor/Adventure Programmes, Lecturer Effect, Lecturer Subject Matter Knowledge, Questioning, Religious Campus, Feedback Personality, Mentoring Computer-assisted Instruction, Lecturer-Students Relationships, Drama/Art Programs, Study Skills, Extra-curricular Programs, dan Classroom Discussion. According to Wiesenganger (2019:80) Humor can improve the learning experience by making the classroom environment more enjoyable. Humor can be an effective teaching...
strategy. This engages students, creates a positive learning environment, and helps in information retention (Nielsen & Klitmøller, 2021:11).

An effective teaching strategy for scientific paper publication involves a variety of methods to adapt different learning styles (Khulzannah 2018:239). Various strategies can adapt diverse learning styles and preferences such as combining multimedia, hands-on activities, and interactive discussions can enhance the learning experience (Moulds, 2021 & Kim et al., 2022). The influence of lecturer credibility, such as building credibility, involves showing expertise, fairness, and genuine concern for student success (Tong et al., 2023). Meanwhile, learning with Outdoor/Adventure Programs, or outdoor programs, offers hands-on experience, encouraging teamwork, leadership and problem-solving skills faced by students (Wiesenger, 2019). Apart from that, the Lecturer Effect with effective communication is key. The key to lecturer communication in conveying information clearly and interestingly influences student learning (Pangarso & Istiyono, 2022). Furthermore, lecturer effectiveness is influenced by communication skills, enthusiasm, and the ability to connect with students (Badr & Ibrahim, 2022:21).

The lecturer aspect of subject matter knowledge, in-depth knowledge increases credibility. This allows lecturers to answer questions, provide insight, and inspire student confidence (Terhart, 2011). Meanwhile, the aspect of questioning or questions as a well-thought-out method stimulates critical thinking and encourages students to analyze information actively (Ramakrishna & Lalitha, 2023). Another factor that is supported is the Religious Campus, in a religious context, understanding and respect for diverse beliefs is very important. Promoting an inclusive environment encourages learning (Hubbi et al., 2020:228; Damopolii et al., 2022:4993; Shodiq, 2023:58).

The aspect of regular and constructive feedback is very important for student improvement. It must be specific, timely, and focused on strengths and development areas (Hattie & Timperley, 2007). Meanwhile, the good aspects of Personality with a positive and approachable personality can make students feel comfortable seeking help and participating in class. It helps students overcome academic and personal challenges (Hattie & Timperley, 2007). Another aspect of Mentoring is providing personal support and guidance, helping students overcome academic challenges and make career decisions (Tarbiyah, 2021:168). Mentoring encourages individual support and guidance (Vaughn, 2023:129).

The next influential aspect of Computer-assisted Instruction as an aspect that incorporates technology into teaching increases engagement and enables personalized learning
experiences (Hattie & Timperley, 2007). Lecturer-Students Relationships building positive relationships with students can increase comfort and motivation to study (Badr & Ibrahim, 2022:31). Open communication and empathy are keys that positively contribute to a supportive learning environment (Vaughn, 2023:224). Drama/Art Programs Drama and art programs stimulate creativity, self-expression, and can be integrated into various subjects to make learning more dynamic (Wiesenger, 2019). Teaching study skills, including time management and effective note-taking, is critical to college students’ academic success (Kim et al., 2022 and Vaughn, 2023). Extra-curricular Programs, apart from academics, extracurricular activities contribute to students' personal growth, forming skills such as teamwork, leadership, and resilience (Terhart, 2011). Classroom Discussion, Discussion promotes active involvement, critical thinking, and exchange of ideas between students (Terhart, 2011).

Aspects that can influence strategy learning and the publication of scientific papers include Parental Involvement, Students Control Over Learning, Boredom, Gender, Use of Calculator, Changing School Calendar, Lack of Sleep, Moving Between Schools, Mathematics, Drugs, Pre-term Birth Weight, Ability Grouping, Not Labeling Students, Ability Grouping for Gifted Students. Based on the results of previous expert research which stated that the lowest results in parental involvement (Parental Involvement) indicate that parents are less involved in their children's education. Parental involvement usually has a positive impact on student learning outcomes (Martin & Evans, 2021). Students feel they have less control or freedom in their learning process (Students Control Over Learning). This may indicate their lack of active participation and responsibility towards learning (Tong et al., 2023). If many students indicate high levels of boredom (Boredom), this may lead to the conclusion that the teaching methods or learning materials are not interesting or challenging for them (Vaughn, 2023).

The low aspect here could indicate that there is inequality or differences in learning outcomes between male and female students (Gender), which requires special attention in developing learning strategies (Yalçın, 2022). The low level of the Use of Calculator aspect, there are concerns regarding the use of calculators in learning mathematics/statistics. This can raise the question of whether calculator use hinders understanding of concepts or basic calculation skills (Hattie & Timperley, 2007). Calendar changes are considered a factor that influences learning outcomes, this shows that scheduling or changes in learning time have a negative impact (Vaughn, 2023).
If many students indicate sleep deprivation, this could lead to the conclusion that students' sleep schedules or habits may be affecting their performance in learning. Moving between universities (Moving Between Schools) teaching campus programs can affect student stability and engagement in learning. Low results here may indicate that students who frequently change schools are facing difficulties (Eacott, 2017). Low results in the context of mathematics indicate that there are special difficulties or challenges faced by students in understanding or mastering mathematical concepts (Hattie & Timperley, 2007). Low results on medication use indicate the presence of stress-related problems among them, which can have a negative impact on health and learning outcomes (Vaughn, 2023).

Pre-term Birth Weight factors can influence a child's development from birth. Low results indicate that premature birth weight can be a risk factor for learning outcomes. If students are not assigned special labels or categories, the low results here indicate that this approach has not provided the expected positive benefits (Rømer, 2019). The low results of Ability Grouping for Gifted Students indicate that the ability group approach for gifted students has not been effective or met their needs (Vaughn, 2023).

CONCLUSION

Based on the evaluation of the Hattie's Visible Learning model in strategic learning and the publication of scientific papers at PBSI and BK IKIP Siliwangi, it is concluded that there are very effective aspects for improving learning, namely humor, teaching strategies teacher, outdoor credibility/adventure programs, lecturer effect, lecturer subject matter knowledge, questioning, religious campus, personality feedback, mentoring computer-assisted instruction, lecturer-student relationships, drama/art programs, study skills, extra-curricular programs, and classroom discussions. Meanwhile, aspects that are less effective in the process of learning strategies and publishing scientific papers that must be avoided are parental involvement, students control over learning, boredom, gender, use of calculators, changing school calendar, lack of sleep, moving between schools, mathematics, drugs, pre-term birth weight, ability grouping, not labeling students, ability grouping for gifted students.

REFERENCES


