

Preferred Student-Centered Strategies in Teacher Education: Input to Outcomes-Based Instruction

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Marie Fe D. De Guzman

College of Teacher Education (CTE), Ramon Magsaysay Technological University,
Iba, Main Campus, Iba, Zambales, Philippines
mfdeguzman617@yahoo.com.ph

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Abstract - *Students being the core of academic learning atmosphere which is output and outcomes driven makes learner-centeredness of instruction essential. Educators' preference of student-centered strategies and understanding of what these strategies promote were investigated in this study. It was conducted at the College of Teacher Education (CTE) in Ramon Magsaysay Technological University (RMTU) in Zambales, Philippines during the first semester, AY 2015-2016. Descriptive research was utilized in this study. An inventory to measure preferences of teachers about student-centered strategies was employed to gather data. SPSS 15 was used to produce the mean and ANOVA. Results showed that the Student-Centered Strategies preferred mainly by the respondents that serve as input to Outcomes-Based instruction are Cooperative Learning, Guided Discussion, Collaborative Learning and Demonstration. They agreed that student-centered strategies stimulate and promote analytic and critical thinking and development of active individual and group participation. The proposed faculty development training and seminars were on the aspects of managing cooperative and collaborative learning, teacher-student instruction planning and techniques for higher-order thinking skills. There is no significant difference on the overall preference of faculty-respondents on student-centered strategies and the overall perceptions on what the student-centered strategies promote attributed to profile variables. Learner centeredness of instruction is recommended approach to modern day pedagogy especially in the Outcomes-Based Education and by the RMTU's vision of a progressive University that is learner-centered. The utilization of student-centered strategies that promote lifelong learners and who can more appropriately cope with the complex and unpredictable problems of today's world is further emphasized.*

Keywords: *Student-Centered Learning, Student-Centered Strategies, Outcome-Based Education, Teacher Education, Preference*

INTRODUCTION

Education is one of the most powerful elements for bringing about the changes required to achieve sustainable development. Teachers are the main actors in this process and teacher education training is key for developing the capacities in teachers to deliver sustainable educational approaches in the future [1]. Teacher education programmes are responsible for training school teachers who are equipped to implement national education policies. This is the mandate of Philippine higher education, to produce with high level of academic, thinking, behaviour, and technical skills/competencies that are aligned with national academic and industry standards and needs and international standards, when applicable [2].

With the significant expectations placed on teacher education programmes and with the advent of outcomes-based teaching and learning, quality graduates having competencies comparable with graduates of neighbouring countries in the employment market has been the target. Reference [3] stressed that it is important that institution should be prepared for changes. An essential part of the process of change is outcomes-based education. Outcome-based education is a self-directed learning and promotes a student-centered approach to learning and teaching [4]. Outcome-based education assumes a certain approach to delivering and assessing learning. There is a shift from the teacher being at the center of the learning process to the student being at the center of the learning process [5].

Student-centered instruction (SCI) is an instructional approach in which students influence the content, activities, materials, and pace of learning. This learning model places the student (learner) in the

center of the learning process [6]. Student-centered (used in conjunction with processing, learning, or teaching) describes a learning process where much of the power during the experience resides with students [7]. By utilizing student-centered facilitation techniques, educators ensure that learning experienced and competency-based learning excels [4]. Reference [8] revealed that many different faculty members have developed and used approaches to teaching that fit the criteria for student-centered learning. Many of these developers have created original names for their approaches which include: Active Learning (Bonwell & Eison, 1991), Collaborative Learning (Bruffee, 1984), Inquiry-Based Learning, Cooperative Learning (Johnson, Johnson, & Smith, 1991), Problem-Based Learning, Peer Led Team Learning (Tien, Roth, & Kampmeier, 2001), Peer Instruction (Mazur, 1997), Inquiry Guided Learning and Project-Based Learning.

The pitfall is that, old habits of utilization of traditional teaching approaches die hard. It takes time and practice to develop a set of habits in order to be successful [9]. It seems that individual will occasionally retreat into old pattern, as old habits die hard. De la Sablonniere et al. [10] stated that although an educational shift from a teacher/expert approach to a student-centered approach maybe associated with positive consequences, it nonetheless require teachers and students to respectively modify their thinking and action towards education.

The Vision statement of the Ramon Magsaysay Technological University (RMTU) shall be a progressive learner-centered research university recognized in the ASEAN Region in 2020. The College of Teacher Education (CTE) of RMTU supports this vision by ensuring that its Programs excel in all respects and produce teachers with the skills and knowledge needed to enable students to learn.

With the results of this study, school administrators of RMTU would prioritize and enhance further the implementation of learner-centered instruction which will start with staff development programs, administrative supervision and resources needed for the purpose of its implementation. The findings of this study would clearly show significant and valid materials, facts and information which can become inputs for future curricular review focused on student-centered pedagogy and outcomes-based instructional practices applied to the field of Teacher Education.

The way teachers teach creates impact on the development of child's learning [11]. This will require energetic faculty commitment to create environments and experiences that encourage and support students to take charge of their own learning and become responsible in group-developed outcome. Learner-centered approach provides opportunities for development of self-regulated and independent learners which are essential for students (teacher education) to be life-long learners and develop future careers.

OBJECTIVES OF THE STUDY

The main purpose of this research study was to determine the preference of student-centered strategies used in the College of Teacher Education of RMTU. Preferred strategies will be input to Outcomes-Based instruction.

Specifically, this study aimed to determine the extent of preference for the student-centered strategies, to describe the perception on what the student-centered strategies promote, to identify what areas of the student-centered instruction to be offered as faculty development training, to test the significant difference on the preference for student-centered strategies attributed to profile variables and to test the significant difference on the perception on what the student-centered strategies promote attributed to profile variables.

METHODS

This research study utilized descriptive research design and quantitative in its analysis. Calmorin and Calmorin [12] pointed out that descriptive method provides essential knowledge for the measurement of all types of quantitative research. This study was conducted at the College of Teacher Education (CTE) of the Ramon Magsaysay Technological University (RMTU), Main Campus which is located in Iba, and capital town of Zambales, Philippines and five satellite campuses that also offers Teacher Education Programs, namely the San Marcelino, Castillejos, Botolan, Masinloc and Sta Cruz Campuses. Ninety four (94) or 100% of the total population of the CTE faculty members served as the respondents of the study.

In this study, survey checklist was the main instrument for data collection. The researcher reviewed Learner-Centered Pedagogy [13]; Pre-Service Teacher's Student-Centered Approach [14]; and Effective Learner-Centered Strategies [15] in

identifying the indicators of the survey checklist. The checklist contain 28 key items/indicators which had two parts. There were 5 items added to the survey instrument on the areas or faculty development training. Respondents were asked to rate about preferred student-centered strategies in their instruction (5-Most Preferred to 1-Not Preferred) and on the question of what student-centered strategies promote (5-Strongly Agree to 1-Strongly Disagree). A set of subject matter experts reviewed and checked the indicators for clarity and directedness to minimize the occurrences of misinterpretations. A pilot test was conducted with the faculty members from the Laboratory High School Department, RMTU, Iba Campus. A pilot project will afford the researcher one final opportunity to ensure that the survey instrument was clear, easy to read and follow and could be completed easily [14]. The approval of the distribution of the survey checklist was secured from the RMTU President, Campus Directors and CTE Dean. The survey checklist was administered by the researcher personally to the respondents. The secrecy of their responses was emphasized. Figures and data which were collected from the survey checklist were analyzed, interpreted and summarized accordingly. Software SPSS 15 was employed to produce the mean and ANOVA.

RESULTS AND DISCUSSION

Table 1. Summary of Results on the Profile of the Respondents

Profile	Faculty-Respondents (N=94)		
	Results	f	%
Campuses of RMTU	Iba/Main	35	37.23
	San Marcelino	16	17.02
	Castillejos	13	13.83
	Masinloc	12	12.77
	Botolan	10	10.64
	Sta. Cruz	8	8.51
	Total	94	100.00
Highest Educational Attainment	Master's	54	57.45
	Bachelor	28	29.79
	Doctorate	12	12.77
	Total	94	100.00
Number of Years Teaching	Mean Year = 14 Years		
	General Education	45	47.87%
	Core/Major	30	31.91%
	Professional Education	19	20.21%
	Total	94	100.00%

Table 1 shows that out of 94 respondents 35 (37.23%) are employed in Iba/Main Campus, Master's degree holders (54 or 57.45%) and have served for fourteen years in the Institution. Majority (45 or 47.87%) of the faculty-respondents are teaching the General Education subjects, followed by 30 (31.91%) who are handling Core or Major subjects and 19 (20.21%) who are teaching the Professional Education subjects.

Table 2. Preferred Student-Centered Strategies of the Respondents

Student-Centered Strategies	AWM	VI	Rank
1. Project-Based Learning	3.85	P	5.5
2. Problem-Based Learning	3.85	P	5.5
3. Demonstration	3.96	P	4
4. Peer Teaching/Mentoring	3.75	P	7
5. Case Study Method	3.59	P	12
6. Think-Pair-Share	3.65	P	11
7. Buzz Group/Brainstorming	3.76	P	8
8. Panel Presentation	3.69	P	9
9. Seminars	3.66	P	10
10. Field Trips	3.39	P	13
11. Collaborative Learning	3.99	P	3
12. Cooperative Learning	4.14	P	1
13. Guided Discussion	4.05	P	2
Overall Weighted Mean	3.79	P	

Table 2 shows the preferred student-centered strategies of CTE faculty of RMTU. Findings revealed that the presented student-centered strategies are preferred by the faculty members of the six campuses of Ramon Magsaysay Technological University (RMTU), Zambales that offers Teacher Education Programs as evidenced from the computed overall weighted mean of 3.79 with verbal interpretation of Preferred. These are learner-centered strategies aimed towards outcomes-based instruction. Reference [16] stressed that the outcomes-based Approach is Learner-Centered. Teacher as partner and facilitator, focus on learner's output, flexible and empowering, emphasis on progress and overall learning experience.

The RMTU CTE faculty-respondents have preference mainly for strategies Cooperative Learning, Guided Discussion, Collaborative Learning and Demonstration in teaching General Education, Professional Education and Core/Major subjects.

The Cooperative Learning (AWM=4.14, rank 1) was preferred student-centered strategy by the faculty-respondents. In parallel to this result, [17] revealed that one of the most important aspects of student centered learning is cooperative learning. Reference [18] stated

that cooperative learning offers a pleasant learning situation for all students, all students have equal opportunity and all students are entitled to be thoughtful and creative. Reference [19] concluded that cooperation is an important aspect of unity, collaboration and social obligation that creates an environment for better learning experience.

Guided discussion (AWM=4.05, rank 2) was also preferred strategy by the faculty-respondents. The strategy is concerned with the development of knowledge, understanding or judgment among those people taking part in it. This is consistent with the findings of [9] that in the discussion presentation method, the students welcome the opportunity to influence their learning and gain greater control over their knowledge and experiences through interactive classroom discussion and negotiation. Abdu-Raheem [20] argued that discussion is more serious than conversation because it requires to be both mutually responsive to the different views expressed.

Collaborative Learning (AWM=3.99, rank 3) was a preferred learner-centered strategy by the faculty-respondents in CTE. Subset of cooperative learning is collaborative learning. Laal et al. [21] found that in a CL situation, learners work together to increase their learning as well as each other's learning. They strive for the success of group. Li [22] concluded that student collaboration and team worksheets in a student-centered classroom provides continuous feedback to both students and instructor throughout the class time.

Demonstration (AWM=3.96, rank 4) was also chosen and favored by the respondents as student-centered strategy in teaching Teacher Education subjects. Reference [15] determined the preference and effectiveness of strategies used in professional education subjects of PUP. The results revealed that "demonstration" was the most preferred strategy by the respondents. Demonstration encourages teamwork in some form, groups or individual presentations. Daluba [23] revealed that demonstration method had significant effect on students' achievement than those taught with the conventional lecture method.

The Project-Based Learning and Problem-Based Learning with AWM of 3.85 and ranked 5.5 respectively were also preferred strategies for learner-centered strategies by the CTE faculty-respondents. These strategies substitutes active learning experiences for lectures. In the project-based, the students' (pre-service education students) present completed projects to class in small or large group

format for reflection [14]. Project-Based Learning (PBL) has been shown to benefit a variety of students in developing collaborative skills [24] and [25]. Project-based learning improves problem-solving, critical thinking skills and students' attitudes towards learning [25]. Hickman [26] on the other hand acknowledged that in Problem-Based Learning (PBL), the teacher creates problem scenarios and inside these scenarios are tasks that require students to use the knowledge that they are expected to learn.

The faculty of CTE also preferred the utilization of student-centered strategies in teaching General Education, Core/Major and Professional Education subjects such as Peer Teaching/Mentoring (AWM=3.85, rank 7); Buzz Group/Brainstorming (AWM=3.76, rank 8) aimed at getting students to state initial opinions on a topic; Panel Presentation (AWM=3.69, rank 9) or small group of persons who have some expertise on the subject, talk about the problem before the class; Seminar (AWM=3.66, rank 10) which involves presentations of a theme for a group; Think-Pair-Share (AWM=3.65, rank 11) in which students are asked to think individually about a question for about a minute, turn to a neighbor and exchange ideas; and Case Study Method (AWM=3.59, rank 12) where in students draw inferences and make decisions of a scenario or true story.

The average weighted mean of strategy Fieldtrip (3.39, rank 13) gained the least average weighted mean. This implies that field trip is utilized but not in a regularly basis or is conducted for some special purpose or culminating activity. de Guzman [27] stressed that fieldtrip is effective learner-centered strategy because experiences gained are vivid, lasting and often more meaningful to the students because they are real-life situations.

Table 3 shows the perception of CTE faculty of RMTU on what the student-centered strategies promote.

Indicator 1 "Analytic and critical thinking" obtained the highest AWM of 4.29 (rank 1) and with verbal interpretation of strongly agree. The faculty-respondents strongly agreed that when utilizing student-centered strategies, analytic and critical thinking of the students are enhanced. Reference [17] emphasized that student-centered learning methodology provides foundation for discussion, questioning, criticizing and evaluation all of which feed into the development of critical thinking and problem solving skills.

Table 3. Perception of the Respondents on What the Student-Centered Strategies Promote

Indicators	AWM	VI	Rank
1. Analytic and critical thinking	4.29	SA	1
2. Reflective and creative thinking	4.17	A	4
3. Allow self-directed learning	4.12	A	7.5
4. Autonomous and self-regulating learners	3.95	A	14
5. Conceptual understanding and retention of knowledge	4.19	A	3
6. Engage in discovery and scientific process	4.12	A	7.5
7. Active individual and group participation	4.24	SA	2
8. Allow independent work/group work	4.11	A	9.5
9. Lead a small group	3.94	A	15
10. Function in a student team	3.97	A	13
11. Transform learning into cooperative/collaborative process	4.11	A	9.5
12. Give ideas and uses these in class discussion	4.13	A	5.5
13. Take responsibility of own learning	4.04	A	12
14. Self-assess performance and skills	4.09	A	11
15. Develop skills needed throughout life	4.13	A	5.5
Overall Weighted Mean	4.11	A	

“Active individual and group participation” obtained the second highest AWM of 4.24 (rank 2) and with verbal interpretation of strongly agree. The respondents strongly considered a dynamic instruction with learners who are active, who can share and are involved. Student-centered environment include active learning [28], and throughout the learning process, the learner is actively engaged [7].

The faculty-respondents agreed that learner-centered strategies promote conceptual understanding and retention of knowledge (AWM=4.19, rank 3), reflective and creative thinking (AWM=4.17, rank 4), when learners give ideas, these were used in class discussion (AWM=4.13) and develop skills needed throughout life (AWM =4.13) rank 5.5 respectively. Some major distinguishing characteristics of outcomes-based curriculum design include lecturers/instructors as mediators between students and learners rather than dictators or mere facilitators [29]. Li [22] acknowledged that the introduction of student-centered classroom is an exciting way to put

learning back in teaching while providing with the tools for lifelong learning and success.

The respondents from CTE agreed upon that student-centered strategies allow self-directed learning and engage in discovery and scientific process, (AWM=4.12, rank 7.5). This implies that the students are given the opportunity to monitor, regulate and control their learning in student-centered instruction. Reference [30] stressed that OBE principles is helpful for educators in order to help the learners to learn and achieve outcomes.

The CTE faculty-respondents agreed that student-centered strategies allow independent work/group work and transform learning into cooperative/collaborative process (AWM=4.11) and ranked 9.5 respectively. These were manifested in a classroom with small group activities which encouraged learner-centered participation. Reference [13] argued that teachers should develop a democratic classroom to encourage involvement, and explore variety of learner-centered strategies.

The CTE faculty also agreed that in student-centered strategies, students self-assess performance and skills (AWM=4.09, rank 11), take responsibility of own learning (AWM=4.04, rank 12), function in a small team (AWM=3.97, rank 13), autonomous and self-regulating learners (AWM=3.94, rank 14) and lead a small group (AWM=3.94, rank 15). Reference [17] stated that the self-regulation and autonomous learning are developed if the role of responsibility for learning is shifted from the teacher to the learners. Ebanks [13] acknowledged that educators who use learner-centered instruction appropriately when it is needed offer students opportunities to explore learning. Davis [4] stressed that learner-centered instruction promote active involvement in the learning process. Students are clear about what they are trying to achieve. They take more responsibilities for their own learning.

The overall weighted mean computed on the perception on what the student-centered strategies promote among the CTE faculty of RMTU was 4.11 and interpreted as Agree. The respondents agreed on what the learner-centeredness promote when utilized in teaching General Education, Core/Major and Professional Education subjects in an outcomes-based instruction and environment.

Table 4 shows the frequency and rank distribution on areas of student-centered instruction which were proposed by the CTE faculty of RMTU to be offered as faculty development training.

Table 4. Areas of Student-Centered Instruction to be offered as Faculty Development Training

Faculty Development Training	f	Rank
1. Managing cooperative and collaborative learning	73	1
2. Teacher-student instruction planning	73	1
3. Assessing/evaluating learners' progress & output	70	4.5
4. Techniques for higher-order thinking skills	73	1
5. Identifying learning activities	57	6
6. Instructional setting (physical & intellectual)	70	4.5

The priorities of the respondents to be offered for faculty development trainings were on the areas of managing cooperative and collaborative learning (Indicator 1), teacher-student instruction planning (Indicator 2) that can improve their instructional management skills and techniques for higher-order thinking skill (Indicator 4). These areas were ranked 1 respectively. Reference [29] stressed that one of the major distinguishing characteristics of outcomes-based curriculum design and implementation underscores the educational experience being learner-centered, interactive, and activity-based instead of being teacher and content based. Fatima and Ahmad [31] encouraged teachers and administrators to review the use of learner-centered pedagogy to enhance student performance.

Seventy (70) teachers proposed the indicator 3 stated as "Assessing/evaluating learners' progress & output" (rank 4.5). Assessing/evaluating learners' progress & output was also considered by the respondents as one of the themes to be offered for faculty training. The instructional setting (physical & intellectual) that will be used to facilitate learning (Indicator 6, rank 4.5) was also proposed by the faculty-respondents.

It is evident that CTE faculty are aware that they need training on the presented areas for student-centered instruction and also mindful of the benefits of these trainings towards learner-centeredness and attainment of an outcomes-based education and environment. The faculty-respondents also acknowledged that further training shapes their thinking and confidence and could increase success with learner-centered pedagogy.

Instructors to undergo more systematic training in order to implement the Student-Centered Learning (SCL) approach, particularly in a passive learning environment was a need [31]. Teachers with limited learner-centered training need to try staff development training because inadequately trained teachers impede students' efforts to learn [13]. Teachers' commitment, innovations, expertise and experience can make alternative ways to achieve the learning outcomes effectively [32].

Table 5. Differences of Perception on the Preferred Student-Centered Strategies as to Profile Variables

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Campus	3.20	5	0.64	1.39	0.24
	40.70	88	0.46		
	43.90	93			
Highest Educational Attainment	2.86	2	1.43	3.17	0.06*
	41.04	91	0.45		
	43.90	93			
Number of Years in Service	2.90	6	0.48	1.02	0.42
	41.00	87	0.47		
	43.90	93			
Subject Handled	1.20	5	0.24	0.49	0.78
	42.70	88	0.49		
	43.90	93			

*Significant

Table 5 shows that the significant values for campus (0.24), highest educational attainment (0.6), number of years in the service (0.42) and subjects handled (0.78) were higher than (0.05) alpha level of significance. Therefore the null hypothesis is accepted. There is no significant difference on the perceptions of the faculty-respondents on the preferred student-centered strategies attributed to above-mentioned variables. Moreover, regardless of differences in respondents' profile they have likeness of preference of learner-centered strategies and understanding of which of these strategies are to be utilized for a certain content (General Education, Professional Education and Major Subjects) and learning activities. Qutoshia et al. [32] acknowledged that adequate and appropriate teaching and learning approaches and strategies that follows learning objectives should be considered in accomplishing goal of producing first-class graduates.

Table 6 shows that the significant values for campus (0.49), highest educational attainment (0.20), number of years in service (0.71) and subject handled (0.61) were higher than (0.05) alpha level of

significance. Therefore the null hypothesis is accepted.

Table 6. Differences of Perception on What the Student-Centered Strategies Promote as to Profile Variables

Source of Variation	Sum of Squares	df	Mean Square	F	Sig.
Campus	1.38	5	0.28	0.90	0.49
	26.97	88	0.31		
	28.34	93			
Highest Educational Attainment	0.99	2	0.49	1.64	0.20
	27.36	91	0.30		
	28.34	93			
Number of Years in Service	1.17	6	0.19	0.62	0.71
	27.18	87	0.31		
	28.34	93			
Subject Handled	1.11	5	0.22	0.71	0.61
	27.24	88	0.31		
	28.34	93			

*Significant

There is no significant difference on the perceptions on what the student-centered strategies promote attributed to above-mentioned variables. This result could mean that there is likeness respondents' understanding of what learner-centered strategies uphold and utilized when teaching General Education, Professional Education and Core/Major subjects. It can be said therefore that the respondents, irrespective of differences of profile upholds the objectives and benefits that can be derived using the learner-centered approaches likewise supportive to outcomes-based education.

CONCLUSION

In order to empower education students to assume responsibility for creating a sustainable future, students should be at the core of a forward looking academic learning atmosphere and facilitate learning that is output and outcome driven and value congruent; as such learner-centeredness of instruction is important.

The Student-Centered Strategies preferred mainly by faculty of CTE, RMTU that serve as input to Outcomes-Based instruction are Cooperative Learning, Guided Discussion, Collaborative Learning and Demonstration. They agreed mainly that student-centered strategies stimulate and promote analytic and critical thinking and development of active individual and group participation. The proposed faculty development training and seminars were on the

aspects of managing cooperative and collaborative learning, teacher-student instruction planning and techniques for higher-order thinking skills. There is no significant difference on the overall preference of faculty-respondents on student-centered strategies and the overall perceptions on what the student-centered strategies promote attributed to profile variables.

RECOMMENDATION

In the light of the foregoing findings and conclusions of the study, it is recommended that the CTE leadership have to advocate and prioritize the use of student-centered teaching and learning since this is recommended approach to modern day pedagogy especially in the Outcomes-Based Education that aims to promote lifelong learning and development of self-directed learners and by RMTU's vision of a progressive University that is learner-centered.

The faculty members have to utilize and combine student-centered strategies suitable to learning content and compatible to students' styles of learning so as to employ appropriate assessment of students' output and outcomes.

The Institution should prioritize the areas that the respondents proposed to be offered for faculty development trainings most especially on aspects such as managing cooperative/collaborative learning, instructional planning and techniques for Higher Order Thinking skills (HOTS).

Different colleges within the same Institution should replicate the study so as to generate a larger sample population to address any perceived ambiguity of results. It will also help to strengthen the validity of the data and the generalization of the results.

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