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What do Students Need? A Needs Assessment to Revise a M.Ed. Elementary Teacher Education Program

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Abstract

The survey research was to identify needs to inform decision-making for program revision through soliciting perceptions of 238 respondents from potential and current students as well as partner school clinical teachers in a master's elementary teacher education program. The survey was comprised of demographic information, 10 questions on program characteristics using Likert scales and 10 questions of multiple choices on course characteristics. By doing so, the research team members were interested in finding important program and course characteristics and the differences of perceptions of each group of participants to modify the elementary teacher education program. The results indicated that five program characteristics were rated above the agreed level and ANOVA results found significant differences in perceptions among the groups of respondents. Additionally, altogether eight course characteristics received more than 50% of participant responses; on the other hand, two others way below 50%. A Crosstabs Text on frequency and percentage of each course characteristic found some different perspectives among the groups. Discussions and implications were included.

Key words: Needs assessment, program revision, program characteristics, course characteristics, elementary teacher education program

Introduction

The success of an educational program is mirrored in the degree of which the program meets the needs of its students. To achieve this goal, the first step for the program is to ensure it has knowledge of student needs. The needs, however, may be difficult to evaluate and identify as they may vary from person to person, and from group to group. To capture and identify needs, a program may administer a needs assessment. Literature reports that needs assessments are measurements used to evaluate and identify needs for future treatments or interventions in education (Beyer & Houston, 1989; English & Kaufman, 1975), psychology (Dombrowski, 1990), or medicine (Amy et al., 2012). Needs assessments are tools that are created and based on certain purposes, targeted at specific groups of people. Thus, it is not always appropriate to use a generic needs assessment when assessing the needs of your own students and making program changes (Nesheim, et al, 2006). It is helpful to create a specific needs assessment and administer it to the population whom you serve to make program changes.

The study was designed to identify needs and solicit perceptions from potential and current students in a master's elementary teacher education program, as well as partner school clinical teachers who are familiar with the program. Specifically, the results were intended to inform decision-making for program revision. Hence, the questions used to guide the study included: 1) What characteristics are important to include in a M.Ed. elementary teacher education program? 2) Is there any difference among participants' perceptions of the program characteristics? 3) What course characteristics are vital to include in the curriculum of a M.Ed. elementary teacher education program? 4) Is there any difference among participants' perceptions of the course characteristics?

Literature Review

1. Purposes of needs assessments

Needs assessments, as the name reflects, assess the needs of pertinent groups. As Hawe (1966) in his commentary entitled “Needs assessment must become more change-focused” seriously called attention to the purpose of the needs assessment and whether information is needed. With any given purpose, a needs assessment is conducted to change and to improve current situations.

The purpose of needs assessments varies from one institute to another. For graduate programs in higher education specifically, the purposes of some needs assessment studies are to evaluate effectiveness, to determine obstacles, barriers, strategies. For example, to evaluate the effectiveness of Northeastern University's Liberal Arts Program, Bauser (1997) created an outcome assessment to investigate graduate students' comprehension, accessibility, retrieval, and communication skills that are relevant to the educational experience and career choice of the students. In another example, Belcher (1996) conducted a needs assessment to determine obstacles for enrollment, helpful services, reasons for pursuing a graduate degree, and overall ideas at Boise State University. And finally, Quarterman (2008) conducted an assessment to identify barriers and strategies for recruitment and retention of a diverse graduate student population as perceived by administrators of graduate programs.

In addition to evaluating effectiveness as well as determining obstacles, barriers and strategies, needs assessments primarily address the problems of programs in the aspects of services and resources. Identifying the resource and service needs of graduate and professional students, Washington-Hoagland and Clougherty Coulter, et al. (2004) examined the role of graduate student organizations in the areas of resources for enhancing graduate students' academic experiences, course offerings, time and location of offerings, and future interests of students. To improve the Master's Program in Counseling and Human Relations at Northern Arizona University, McCarthy-Tucker, Swanson, and Lund (1998) conducted a needs assessment looking into student employment experiences, attitudes toward the program, and suggestions to meet the needs of their students, as well as employers. Phillips, Settoon, and Phillips (2008) Enhancing a curriculum: A focus on the development process. to meet the needs of their particular students, as well as employers. (2002) Identifying the Resource and Service Needs of Graduate and Professional Students to obtain information regarding library use, as well as attitudes towards library services and resources.

To retain graduate students and enhance their education, it is necessary to first assess their needs and experiences. General research on graduate students is useful but does not inform educators about the needs of students in their own programs (Nesheim, et al, 2006). Diversity among graduate students produces varying needs, therefore, institution- and program-specific data are needed to design graduate programs and quality experiences for students. Coulter, et al. (2004) maintain that to meet those needs, programs need to solicit feedback directly from the students in order to improve the quality of students' educational experience. From this stance, needs assessment is an effective method for determining the quality of service delivery in higher education.

2. The development of a needs assessment

While the development of a needs assessment could vary from one program to another, some researchers reveal some specific steps. For example, Rossett (1982) proposed five types of items in generating needs assessments, i.e. to find problems, to select problems, to prove knowledge and skill, to find feelings and to find causes, after he reviewed assessment history and techniques applied.

On the other hand, while surveys are normally utilized as a tool when a needs assessment research is conducted, the development of a needs survey tool requires certain steps. Bauser (1997) in his dissertation described a nine-step procedure to develop a needs assessment. First, the researcher should conduct a comprehensive review of the literature. Secondly, he should establish criteria for the survey content and format. Thirdly, the researcher should form a formative committee who provide input on the issues and practical requirements for the questionnaire, review drafts and provide feedback during the developing stages. Fourthly, the researcher should ensure he had two sample evaluation tools for the needs assessment.

Fifthly, the researcher should write a draft of the survey tool. Sixthly, the researcher should conduct a pilot test of the instrument. Seventhly, the researcher should submit the pilot test results to the formative committee for validation of the survey content and format and any final revisions. Eighthly, the draft should be reviewed by the summative committee. Lastly, the summative committee should consider there are no further revisions needed. Additionally, Bauser suggested some ideas for a needs assessment. He recommended the researcher consider a ranking format that allows the studied population to value their judgments and then a scaling format to present the results, while he advised that any given format may not warrant valid and reliable meaning of the information. He also suggested the researcher to deliberate budget, time, the availability to the studied group and information needed by the institution. Bauser's procedures signpost that detailed planning and execution of the development of a survey forges a well-thought-out and meaningful needs assessment research.

For a staff survey to assess school needs for low-achieving students, Beyer and Houston (1989) applied slightly different steps. Similarly, the researcher conducted a comprehensive literature review. They also established criteria for the survey content and format, and agreed that the best format is based on the budget, time, population accessibility and demands for information. On the other hand, they emphasized that the content for a student assessment survey should derive from dialogue between stakeholders to maintain the purpose and objectives of the survey research.

3.Methods utilized in needs assessments research

To meet the purpose of a needs assessment research, methods adopted are what researchers first consider. Hawe (1966) suggested two options for needs assessments. One is felt needs, i.e., to conduct action research approach and focus on needs felt by target population. The other is information needs, i.e., to identify and collect information that justifies current services. On the other hand, in the literature reviewed, two distinguishable approaches are found to be popular: surveys and interviews. Between the two, surveys are more popular.

For example, to determine obstacles for enrollment, helpful services, reasons for pursuing a graduate degree, and, overall ideas about the university, Belcher (1996) conducted a survey with 297 effective respondents. The survey results indicate obstacles identified to graduate study included finances, work schedules, and course availability. Desirable services cited by respondents included summer courses, graduate assistantships, courses through distance learning, childcare, and graduate housing. The results of this survey revealed helpful information that could be used by the graduate programs to meet the needs of their particular students.

In another study, to identify resources for enhancing graduate students' academic experiences, Coulter, et al. (2004) conducted a survey with 30 questions, resulted in 31 out of 93 students (a 33.33% response rate) responding to the survey. The results found that graduate students recommended the program to provide a better orientation and general information concerning campus resources, professional development workshops and job-search strategies, a graduate student lounge, and a more efficient system for communicating academic programs and activities, which are practical and fundamental for graduate students' campus lives.

Diket and Lockley, (1997) also administered a survey to graduate students (N=133) to determine if their needs were being met. The researchers were interested in student satisfaction with course offerings, the time and location of the courses and the particular interests of the students. Survey results indicated that while the students were satisfied overall with the program, they felt that there were limited offerings for the class schedules. Additional suggestions came out of the results, such as a better library facility. Student input provided useful information regarding areas such as the comprehensive exam. The students stated that it was helpful to them to study in groups with sample questions. Thus, the survey used to assess graduate student needs was useful to the researchers as they implemented and improved their program.

Quarterman (2008) developed a survey instrument with two sections which included demographic information and a question analysis. The researcher surveyed 100 administrators, with 51 (51.0%) responded to questions which pertained to their feelings about barriers and strategies of recruitment and retention. The analyzed themes indicated barriers to recruitment, including lack of financial resources, an insufficient pool of eligible students and the need for planned recruitment and retention programs.

Likewise, the themes that occurred as strategies for recruitment included more personal contact with prospective students through visits, an increase in recruitment fairs and career days, and an availability of financial resources. Themes were also derived for the most dominant barriers for the retention of diverse students. These included student feelings of loneliness and isolation and student perceptions of a non-supportive environment. Themes which emerged as strategies for retention included adequate financial resources, faculty role models and mentors, and ways to help students reach mastery of subject matter. Quarterman (2008) concluded that this research has implications for administrators and graduate faculty who want to understand and overcome barriers and strategies of recruitment and retention of diverse graduate students at predominately white institutions. The needs assessment utilized in this study was a useful tool in identifying the perceptions of those directly involved with the programs themselves.

Washington-Hoagland and Clougherty (2002) report the results of a needs assessment using survey administered to a random sample of graduate and professional students with a total of 318 surveys returned representing a final 44% response rate, in a large research university in the Midwest. The purpose of the survey was to obtain information regarding library use, as well as attitudes towards library services and resources. Results of the survey indicated that the students needed more help when working in the library and desired increased library instruction. Students were also not aware of the many services that were available. The survey findings were important to the university in order to maintain and support its top-rated graduate education. Thus, the information obtained from the students themselves through a needs assessment survey proved to be valuable for the university.

A disparity of using a survey was found in one research. McCarthy-Tucker, Swanson, and Lund (1998) assessed needs for program improvement via a mail survey. The purpose of the mail survey was to evaluate the effectiveness of the program in the aspects of student employment experiences, attitudes toward the program, and suggestions for improvement. Because of mail service, they were able to gather survey data across the state. From a total population of 655 students, they were able to get 264 responded. This study utilized a different approach that allowed a bigger pool of population to include in a survey needs assessment.

Differing from using survey, other researchers consider that the best approach is to ask relevant people. To understand the needs of graduate students, Nesheim, et al. (2006) conducted studies at three institutions with four processes: to interview administrators, program coordinators, faculty and staff members; to hold focus group interviews with graduate students; to examine perceptions of peer institutions; and, to develop recommendations. Nesheim, et al. promoted that the research with the three universities illustrates how needs assessment at the individual institution level can be used to enhance and support services and programs for graduate students. Because of the studies conducted, the specific institutions were better able to understand the experiences and needs of their own graduate students and thus be better able to implement practices to meet those needs.

Each of the studies discussed above involved the use of needs assessments that were developed and implemented in order to meet the needs of specific populations. The needs assessments were constructed with those particular groups of individuals in mind (Nesheim, et al. 2006; Diket & Lockley, 1997; Belcher, 1996; Washington-Hoagland & Clougherty, 2002; Phillips, Settoon, & Phillips, 2008; McCarthy-Tucker, Swanson, & Lund, 1998; Bauser, 1997; Quarterman, 2008). Once the needs assessments were conducted and analyzed, valuable information existed for programs and universities to make necessary changes. It must be remembered that universities, and programs within those universities, are unique with their own cultural settings. When considering program development and change, it is helpful for the program to conduct its own student needs assessment in order to make appropriate and informed decisions.

Methods

The present study adopted an intrinsic case research design (Mertens, 2010) using a survey. This research design was selected because we hoped to achieve a comprehensive understanding of the case. In turn, the results would assist us in problem solving, instead of pursuing generalizable results. Based on literature reviewed, we started the formation of the survey by taking up several steps: (a) ensure the purpose is to change for the program, (b) form a research team, (c) take up the tasks of reviewing literature, (d) create a survey, (e) submit the drafted survey to the entire faculty group for review,

(f) revise the draft accordingly and finalize the survey, (g) administer the survey to the target groups, (h) analyze collected data, and (i) come out of the results to the research questions.

Sample and Setting

With this design, therefore, sampling was based on the consideration of how resources were instrumental to the findings, receptive to and available for the study (Mertens, 2010). The study setting was the College of Education of a comprehensive university in the southeastern United States and its partner schools, where field-based courses and research have been well-established for years. The college has an enrollment number of approximately 1,000 students from programs of undergraduate, M.Ed., Ed.S. and Ed.D.

Target subjects recruited for the study were master's students currently enrolled in the M.Ed program (n=18), undergraduate Early Childhood Education (ECE) preservice teachers (n=92) who were about to graduate, and clinical supervisors (n=553) in partner schools with whom we have collaborated for field teaching experiences over many years and many of them either obtained their master's degree in our program or were our future potential candidates. The surveys resulted in altogether 238 effective samples (a total of 40.61% response rate) with 15 graduate students (83.33%), 86 undergraduate students (93.48%), and 137 clinical supervisors(24.77%).

Demographic information gathered through the surveys indicated that, among the subjects, 212 were white (89.1%), 16 African (6.7%), six biracial (2.5%), one Hispanic (0.4%), and 3 others (1.3%). They were predominately female (n=236). Among the 137 clinical supervisors, 26 held a bachelor's degree (19%), 74 a master's degree (54%), 27 an educational specialist (19.7%), four a doctorate (2.9%), with six unknown (4.4%).

Instrumentation

In order to reach the goal of identifying student needs regarding the master's program in elementary teacher education, the research team utilized a survey approach. The purpose of the survey was to solicit the perceptions of current and potential students and clinical supervisors on important program and course characteristics to improve the program.

The creation of the survey was a journey with multiple phases. First, we formed a research team of three members. Second, in addition to comprehensively reviewing relevant literature, we identified a report on the topic of prospective "Early Childhood Master's student Contemporary Issues in Technology and Teacher Education Preferences" from Eduventures, an institution that conducts research and consulting for higher education (Eduventures, 2011). Then, we reviewed the report regarding the results of a survey administered to 22,721 respondents nationwide. The report has categories, including demographics, important program factors, enrollment preferences, activities interests, top motivating factors, evaluation factors, learning sources, information sources, and market terms. Next step, we the research team as a group evaluated, discussed and tailored the needs survey for this study using the report as our important reference. Primarily, we adopted the topics of demographics, important program factors, and activities interests as our survey foci. After we created the survey, based on the needs identified by the research team, we brought it back to program meetings for faculty members to review and provide feedback. Based on the feedback, we further revised the needs survey until it was considered valid for this study and obtained approval.

The completed survey contained three sections: demographics, important program characteristics, and important course characteristics; respondents were required to respond to each part. Demographics included age, race, certificate, and status. There were 10 items included in the program characteristics section and a 5-point Likert Scale was used. The points included 5= strongly agree, 4= agree, 3=neither agree nor disagree, 2=disagree, and 1=strongly disagree. In the course characteristics section, ten questions were presented that required respondents to select those that they considered important to include in the program. The medium we employed was Qualtrics, which was available in the university instructional system.

Data Collection

To collect data from different groups of respondents, we used varied approaches. For current undergraduate students who attended face-to-face classes, one of the research team members visited their classes with the instructors' agreement and explained the study. She then distributed an informed consent to each student. Those who agreed to participate responded to the survey. There were 92 preservice teachers in the tier and 87 of them (94.6%) were present in class that day. All of those attended responded to the survey.

The 18 master's students were taking online classes. Therefore, the survey was administered to them through email contact, using the Qualtrics link to the survey. We first retrieved student email addresses through the program and sent an informed consent in the email message. The survey was attached to the email. The respondents clicked on the link in order to start the survey. Fifteen (83.3%) students responded to the survey.

Finally, we gathered the email information of schoolteachers, who were serving or had served as clinical supervisors for our students, through the director of the field placement office. Altogether, we obtained 553 samples and worked to tease out some that were not currently teaching. We ended with 547 selected. Afterwards, we informed those selected of the purpose of the survey and sent them the Qualtrics link. The response period lasted for a month because we considered that teachers are busy and might ignore the request. Therefore, we twice reminded those who did not respond to the survey through the Qualtrics email system. When the survey ended, 135 effective samples were collected, with a response rate of 24.7%. All the above-mentioned administrative process began right after an IRB approval was obtained.

Data Analysis

The anonymous data were aggregated both through in-person collection and the Qualtrics online survey system and joined in the SPSS spreadsheet. Thereafter, we used SPSS software to analyze the data to find the answers to the research questions. We examined the means of the data collected from items 1-10 in the important program characteristics part for the first research question. We then ran an ANOVA test with a selection of Scheffe multiple comparisons to examine how the perceptions of each group varied. The third step was to use the data gathered from section III of the survey that addressed course characteristics and ran a frequency test, resulting in descriptive information of frequency and a valid percent. Finally, to investigate the likelihood of the perceptions of each group towards choosing course characteristics, a binary logistic regression test was operated.

Results

The results were presented for all research questions by order. We provided tables of information of numbers first and explanations of the numbers afterwards.

1. What characteristics are important to include in a M.Ed. elementary teacher education program?

To respond to the first inquiry question, descriptive information of means and standard deviation were organized in Table 1.

Table 1 Descriptive Results of Program Characteristics(N=238)

Characteristic	Group	N	Mean	Std. Deviation
Working at own pace	US	86	4.01	.711
	GS	15	4.27	1.100
	CT	137	3.42	1.005
	Total	238	3.69	.966
Being fully online	US	86	3.44	1.080
	GS	15	4.53	.915
	CT	137	2.83	1.234
	Total	238	3.16	1.246
Include courses in asynchronous format	US	85	3.00	.617
	GS	15	3.93	1.335

	CT	134	3.01	.725
	Total	234	3.07	.772
	US	86	3.35	.682
Include courses in	GS	15	3.67	1.234
synchronous format	CT	134	3.41	.696
	Total	235	3.40	.736
	US	86	3.60	.691
Utilize accelerated	GS	15	3.87	1.125
scheduling	CT	135	3.59	.661
	Total	236	3.61	.708
	US	86	3.94	.709
Utilize a schedule	GS	15	4.33	1.047
that maximizes	CT	137	4.18	.730
summer sessions	Total	238	4.11	.753
	US	86	4.27	.758
Allow graduates to	GS	15	4.33	.724
be more marketable	CT	136	4.14	.712
	Total	237	4.20	.730
	US	86	4.34	.713
Promoting	GS	15	4.53	.640
professional	CT	134	4.44	.710
performance	Total	235	4.41	.706
	US	86	4.65	.699
Provide the potential	GS	15	4.80	.414
for increased salary	CT	137	4.36	.830
	Total	238	4.50	.778
	US	86	4.27	.789
Allow for a Focusing	GS	15	4.40	.910
on specific subject	CT	137	4.22	.783
areas.	Total	238	4.25	.791

US = undergraduate student, GS = graduate student, CT = clinical supervisor

5= strongly agree, 4= agree, 3=neither agree nor disagree, 2=disagree, and 1=strongly disagree

The mean results indicate that five program characteristics were rated above an agreed level. According to the degree of the mean results, the characteristics include: i) providing the potential for increased salary (mean = 4.50); ii) promoting professional performance (mean = 4.41); iii) allowing for focusing on specific subject areas (mean = 4.25); iv) allowing graduates to be more marketable (mean = 4.20); and v) utilizing a schedule that maximizes summer sessions (mean = 4.11). These characteristics were relevant to teachers' benefits (i & iv), professional ability (ii & iii) and time use (v).

On the other hand, the remaining five characteristics were rated under an agreed level. Those characteristics included working at their own pace, courses being fully online, courses put in synchronous format and using accelerated scheduling, which were all relevant to how courses are set up.

2. Is there difference among participants' perceptions of the program characteristics?

To investigate the difference among the three groups, an ANOVA test was utilized (see Table 2).

Table 2 ANOVA Results of the Perceptions of the Three Groups of Participants(N=238)

		df	Mean Square	F	Sig.
Working at own pace	Between Groups	2	11.812	14.065	.000*
	Within Groups	235	.840		
	Total	237			
Being fully online	Between Groups	2	24.926	18.415	.000*
	Within Groups	235	1.354		
	Total	237			

In asynchronous format	Between Groups	2	6.001	10.924	.000*
	Within Groups	231	.549		
	Total	233			
In synchronous format	Between Groups	2	.651	1.206	.301
	Within Groups	232	.540		
	Total	234			
Accelerated scheduling	Between Groups	2	.513	1.024	.361
	Within Groups	233	.502		
	Total	235			
Maximizing use of summer sessions	Between Groups	2	1.947	3.506	.032*
	Within Groups	235	.555		
	Total	237			
Being more marketable	Between Groups	2	.576	1.082	.341
	Within Groups	234	.532		
	Total	236			
Promoting professional performance	Between Groups	2	.403	.806	.448
	Within Groups	232	.500		
	Total	234			
Potential for increased salary	Between Groups	2	2.905	4.957	.008*
	Within Groups	235	.586		
	Total	237			
Focusing on specific subject areas	Between Groups	2	.247	.393	.676
	Within Groups	235	.629		
	Total	237			

P<.05

The ANOVA results indicate significant differences in perceptions among the three groups of participants. These differences were found in five areas: 1) allowing students to work at their own pace; 2) being fully online; 3) including courses in asynchronous format; 4) utilizing accelerated scheduling during summer sessions; and 5) providing the potential for increased salary. Since the ANOVA results indicated some significant differences in the five items, multiple comparisons using Scheffe were conducted because the numbers of the three groups were not similar. See Table 3.

Table 3 Multiple Comparison Results Among Groups' Perceptions(N=238)

Characteristic	Group comparison	Mean Difference (I-Std. Error J)	Sig.
Working at own pace	US vs. GS	-.255	.610
	US vs. CT	.588*	.000*
	CT vs. GS	-.843*	.004*
Being fully online	US vs. GS	-1.091*	.004*
	US vs. CT	.610*	.001*
	CT vs. GS	-1.701*	.000*
In asynchronous format	US vs. GS	-.933*	.000*
	US vs. CT	-.015	.990
	CT vs. GS	-.918*	.000*
In synchronous format	US vs. GS	-.318	.305
	US vs. CT	-.062	.832
	CT vs. GS	-.256	.442
Accelerated scheduling	US vs. GS	-.262	.419
	US vs. CT	.012	.992
	CT vs. GS	-.274	.366
Maximizing use of summer sessions	US vs. GS	-.391	.174
	US vs. CT	-.241	.066
	CT vs. GS	-.151	.758
Being more marketable	US vs. GS	-.066	.949

		US vs. CT	.128	.101	.447
		CT vs. GS	-.194	.198	.622
Promoting professional performance		US vs. GS	-.196	.198	.612
		US vs. CT	-.103	.098	.574
		CT vs. GS	-.093	.193	.890
Potential for increased salary		US vs. GS	-.149	.214	.786
		US vs. CT	.286*	.105	.026*
		CT vs. GS	-.435	.208	.115
Focusing on specific subject areas		US vs. GS	-.133	.222	.837
		US vs. CT	.048	.109	.906
		CT vs. GS	-.181	.216	.704

* The mean difference is significant at the 0.05 level.

Results of multiple comparisons indicate that significant differences exist in four characteristics: working at own pace, being fully online, in asynchronous format and potential for increased salary. In the characteristic of working at their own pace, significant differences were found between the perceptions of clinical supervisors and those of undergraduate and graduate students, which could mean that clinical supervisors do not mind as much whether the program allows them to work at their own pace. In the area of being fully online, the results indicate significant differences in the perceptions among them all, which reveals that the perceptions of graduate students were significantly different than those of undergraduate students and clinical supervisors, with graduate students strongly agreeing, undergraduate students showing no preference, and clinical supervisors disagreeing that the program should be put fully online. In the area of whether the program should put courses in an asynchronous format, the perceptions of graduate students were significantly different than those of undergraduate students and clinical supervisors, which indicates that graduate students agreed to have courses in an asynchronous format and undergraduate students and clinical supervisors do not clearly claim this position. Finally, in the area of whether the program should promote the potential for increased salary, the perceptions of undergraduate students were significantly different than those of clinical supervisors, with undergraduate students significantly agreeing more positively.

3. What course characteristics are vital to include in the curriculum of a M.Ed. elementary teacher education program?

4. Descriptive statistics from a Crosstabs test resulted from the responses towards each course characteristic and were organized in a table format. (See Table 4).

Table 4 Frequency Allocation on Course Characteristics Chosen by Participants (N=238)

Course Characteristics	N of Responses	% of all Responses	% of observations
Cultural and linguistic diversity	147	9.6%	61.8%
Developmentally appropriate practices for all learners	212	13.8%	89.1%
Place-based curriculum	63	4.1%	26.5%
Inquiry-based curriculum	137	8.9%	57.6%
Project-based curriculum	96	6.3%	40.3%
Technology-based curriculum	171	11.1%	71.8%
Integration across content areas	211	13.7%	88.7%
Theories and practices of management including behavior, physical settings and inclusion	181	11.8%	76.1%
Theories and practices of assessment: data-driven teaching and learning	155	10.1%	65.1%
Learning activities that are relevant to real world situations	163	10.6%	68.5%
Total	1536	100.0%	645.4%

With a total of 1,536 response counts out of 238 participants, it means each participant averagely selected more than 6 out of the 10 course characteristics, a fact showing that most of the course characteristics were deemed important to include in the program of study. The results indicate four characteristics receiving more than 70% of the selection rate. In a decremental order, they include: a) developmentally appropriate practices for all learners (89.1%); b) integration across content areas(88.7%); c) theories and practices of management, including behavior, physical settings and inclusion(76.1%); and d) technology-based curriculum(71.8%). Following were two characteristics, including learning activities that are relevant to real world experiences (68.5%) and theories and practices of assessment: data-driven teaching and learning (65.1%). Scrutinized broadly, altogether eight course characteristics received more than 50% of participant responses, two others, including place-based and project-based curriculum, were way below 50%.

5. Is there any difference among participants' perceptions of the course characteristics?

A close comparison of group wide results revealed some remarkable information (see Table 5).

Table 5 A Crosstabs Text on Frequency and Percentage of Each Course Characteristic

Course Characteristics		Undergraduate Students (n=86)	Graduate Students (n=15)	Clinical Supervisors (n=137)	
Cultural and linguistic diversity	Count	69	9	69	147
	% within the group	46.9%	6.1%	46.9%	
	% within the status	80.2%	60.0%	50.4%	
	Total	29.0%	3.8%	29.0%	61.8%
Developmentally appropriate practices for all learners	Count	76	14	122	212
	% within the group	35.8%	6.6%	57.5%	
	% within all status	88.4%	93.3%	89.1%	
	Total	31.9%	5.9%	51.3%	89.1%
Place-based curriculum	Count	31	4	28	63
	% within the group	49.2%	6.3%	44.4%	
	% within all status	36.0%	26.7%	20.4%	
	Total	13.0%	1.7%	11.8%	26.5%
Inquiry-based curriculum	Count	48	13	76	137
	% within the group	35.0%	9.5%	55.5%	
	% within all status	55.8%	86.7%	55.5%	
	Total	20.2%	5.5%	31.9%	57.6%
Project-based curriculum	Count	44	6	46	96
	% within the group	45.8%	6.3%	47.9%	
	% within all status	51.2%	40.0%	33.6%	
	Total	18.5%	2.5%	19.3%	40.3%
Technology-based curriculum	Count	57	10	104	171
	% within the group	33.3%	5.8%	60.8%	
	% within all status	66.3%	66.7%	75.9%	
	Total	23.9%	4.2%	43.7%	71.8%
Integration across content areas	Count	75	13	123	211
	% within the group	35.5%	6.2%	58.3%	
	% within all status	87.2%	86.7%	89.8%	
	Total	31.5%	5.5%	51.7%	88.7%
Theories and practices of management, including behavior, physical settings and inclusion	Count	52	12	117	181
	% within the group	28.7%	6.6%	64.6%	
	% within all status	60.5%	80.0%	85.4%	
	Total	21.8%	5.0%	49.2%	76.1%
Theories and practices of assessment: data-driven teaching and learning	Count	39	7	109	155
	% within the group	25.2%	4.5%	70.3%	
	% within all status	45.3%	46.7%	79.6%	
	Total	16.4%	2.9%	45.8%	65.1%
	Count	70	9	84	163
	% within the group	42.9%	5.5%	51.5%	

Learning activities that are relevant to real world situations	% within all status	81.4%	60.0%	61.3%	
Total	Total	29.4%	3.8%	35.3%	68.5%
Total	Count	86	15	137	238
	%	36.1%	6.3%	57.6%	100.0%

A Crosstabs Text on frequency and percentage of each course characteristic found that all three groups overwhelmingly favored two potential course characteristics: a) developmentally appropriate practices for all learners (US= 88.4%, GS=93.3%, CT=89.1%) and b) integration across content areas (US=87.2%, GS=86.7%, CT=89.8%). Next, more undergraduate students (US=80.2%, 81.4) than graduate students (GS=60%, 60%) or clinical supervisors (CT=50.4%, 61.3) favored cultural and linguistic diversity and learning activities that are relevant to real world situations. Also, more graduate students (GS=86.7%) than undergraduate students (US=55.8%) or clinical supervisors (55.5%) selected inquiry-based curriculum. Finally, more clinical supervisors (CT=77.9%, 75.9%) than graduate students (40%, 66.3%) or undergraduate students (45.3%, 66.7%) recommended that theories and practices of assessment, data driven teaching and learning and technology-based curriculum be included in the program.

Discussion and Conclusion

This section is dedicated to discussing and concluding the study. The discussions include justifications and speculations of the results.

Program characteristics should address students' needs in real-life situations, both in personal and professional aspects.

The results indicate that respondents recommended five characteristics ($4.11 \leq M \leq 4.50$) to include in the program which tend to accentuate the practicality in a career. The characteristics included: maximizing the use of summer sessions, allowing graduates to be more marketable, promoting professional performance, providing potential salary increase, and allowing for a focusing on specific subject areas. All the recommended characteristics pertaining to teachers' benefits, professional ability and time use share a common value towards helping improve real-life situations, both in personal and professional aspects. On the other hand, the other five items, all relevant to how courses are set up, were not commonly agreed upon.

The tendency to choose elements that help improve real-life situations may be justified through the lens of how future students adapt to the economic and political environments they face by pursuing an advanced degree. First, since most graduate students are full-time teachers, it makes sense to maximize the use of summer sessions that allows students to focus their attention more readily on the courses. Also, at an era when the job market releases few teaching positions, respondents believe that better credentials may warrant a better opportunity for them to be employed. Further, in whatever reason, it is believed that a good way to receive a salary increase is to earn a diploma that promotes for salary advancement, which is also one reason that drives students to pursue a masters' degree. Additionally, under ever changing school reforms, further pursuing advanced knowledge seems to provide a good approach to improve professional performance. Finally, a master's degree is believed to allow for the enhancement of subject areas and with the degree, teachers may have the option to teach the subject area they prefer and focus on. These selections seem to be justifiable through the circumstance teachers are facing nowadays.

Differing backgrounds and needs lead to varied perceptions of program characteristics, which requires more deliberation at the eve of program revision.

Significant differences among the perceptions of the three groups concerning how the program should be delivered are found to be relevant to respondents' backgrounds and needs. Firstly, while undergraduate and graduate students agreed that the program should allow for students to work at their own pace, clinical supervisors did not see this as important. This disparity could stem from the reality that clinical supervisors experience at the workplace. In recent years, school reform has become a norm, and clinical supervisors have learned to work collaboratively with others and benefited from this model of working.

Additionally, over the past few years, the way curriculum is designed and taught in public schools has been teaching from the scripts, and thus, their students oftentimes work as a class to go through the textbooks. Based on the reality in school, the teachers may not value working at own pace as an independent approach to teaching and learning.

Another disparity is found regarding whether the program should be fully online: graduate students agreed strongly, whereas clinical supervisors did not agree. Some speculations could justify this contradiction of perceptions. First, the demographic information reveals that most of the responding clinical supervisors (77%) received a master's degree and above. Many of the teachers received their degrees when courses were taken face-to-face on campus. Therefore, they might not be familiar with online courses or realize the benefits. Conversely, since graduate students are immediate consumers and are currently in the process, they are more readily facing the responsibilities of juggling a full-time teaching job, a family, and attending graduate courses in the evening and hence, well understand the benefits of online courses. The differing experiences might have led to divergent responses.

Additionally, in the area of including courses in an asynchronous format, the perceptions of graduate students were significantly different than those of undergraduate students and clinical supervisors. This might be because graduate students are now taking online classes and take this as a helpful mechanism in learning, while the other two groups are not. Graduate students might have been experiencing the benefits of asynchronous learning activities, such as in discussion rooms where they get to post and exchange ideas when they do not necessarily instantly communicate with each other but can pop in anytime they are available. It allows for a more independent, learner-based format, a similar concept of those for working at one's own pace and having fully online courses. On the contrary, having taken classes face to face, clinical supervisors and undergraduate students might not fully understand how the concept of an asynchronous format works to help learning. These findings imply that having the experiences of taking online courses, graduate students can identify and embrace the beneficial program characteristics that provides flexibility of autonomy.

Finally, a disparity is found among the perceptions regarding potential increase of salary. Compared to clinical supervisors, undergraduate students consider potential increase of salary an important characteristic to add to the program. This finding echoes the program characteristic, to allow all graduates to be more marketable. Advancement of salary increase and marketability seem to be great characteristics and serve as motivations for potential master's students when considering to return to school and pursue a higher degree.

While most best practices are deemed as important course characteristics, others might raise even more vigilance to the program revision consideration.

Most respondents rated most (n=8) of the listed course characteristics (N=10) as important to include in the program, which is not surprising as they are considered best practices in education. Nonetheless, the rating of each selected course characteristic reveals some messages concerning the extent of student needs. For example, two characteristics received the highest selection rates, including: 1) focusing on developmentally appropriate practices (DAP) for all learners (89%) and 2) integration across content areas (88%). These characteristics reflect the needs of future graduate students, especially at the time of curricular change adopting the Common Core Curriculum. Nonetheless, while the selection of DAP is commendable, the low choice rate given to cultural and linguistic diversity (61.8%) is incongruent. For classroom practice to be student-centered, in addition to DAP that is for every student (Charlesworth, 1998), course characteristics must also include the cultural and linguistic diverse needs of students (Richards, Brown, & Forde, 2007). The low rate for cultural and linguistic needs could reflect the respondents' oblivious views of students who are culturally and linguistically diverse, which deserves a close attention while a program is considering change in course characteristics.

Additionally, some characteristics received differing ratings from different groups of respondents. For example, graduate students suggested including inquiry-based curriculum, while undergraduate students recommended project-based curriculum. Clinical supervisors proposed that theories and practices of assessment, and data driven teaching and learning, be included in the program. These differing ratings might have reflected what they have experienced currently on campus or in the field.

It is also noted that place-based curriculum and project-based received the lowest selection rates of 26.5% and 40.3% respectively. Place-based curriculum involves engaging students in using and exploring objects and occasions in the community, thus permitting learning to become multidisciplinary and meaningful (Woodhouse & Knapp, 2000). Project-based curriculum allows students to connect understanding with experience in the daily world and makes learning more meaningful and more pleasurable (Krajcik, McNeill, & Reiser, 2007). Unfortunately, the low selection rates might have reflected the real instructional practices in the classrooms, which may require further investigation regarding what has caused this to happen and how to resolve the problem. In turn, it urges the program to seriously consider what course characteristics to include to change future students' classroom practices.

Conclusion

Varied perceptions from differing backgrounds and needs provide wider perspectives for program and course characteristics modification. The inclusion of three groups of respondents allows for the program to look closer at the differing needs of the groups and to justify the incorporation of program and course characteristics for future change. The differing perceptions, in a certain sense, mirror the respondents' positions, experiences, and needs. Conducted for a program change in the master's Early Childhood Teacher Education, this needs assessment indeed has provided helpful information from varied angles and served the purpose well. In turn, the results may serve to inform and may only be recommendable for program change, especially for teacher education programs at the early childhood and elementary levels.

This study stemmed from the purpose of changing a current master's program. The research team has expected to achieve results that represent what potential students and experienced clinical supervisors perceive as needed. During the process, the participants became partners in creating a state-of-the-arts education program for future students. Involving stakeholders in assessing needs for program change benefits all stakeholders in the learning community and at the same time provides a wider perspective for deliberation of program change.

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