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By

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Introduction

For over 70 years, assessment centers have contributed to employee selection, training, and development in organizations (Spychalski, Quinoies, Gaugler, & Pohley, 1997; Stephanie Haaland, 2002; Wendel & Joekel, 1991). However, they have not regularly been used for selection of students to an educational program. Given that assessment centers are effective at improving staffing in business settings, it can be speculated that they could also be effective in educational settings. The purpose of this research is to examine the feasibility of developing a selection-based assessment center for applicants to a graduate program in industrial-organizational psychology.

An assessment center is an employee data collection method that contains multiple assessments and business simulation exercises, that are developed based on the results of job analysis. Participants spend several hours or days completing the exercises and various measures. Trained assessors then record applicants' behaviors and integrate the observations into reported results ("Guidelines and ethical considerations for assessment center operations," 2009).

The history of assessment centers trace back to the 1930s, after Germany was defeated in World War I. In order to rebuild their armed forces, the Germans first implemented the idea of an assessment center, using situational tests for leadership behavior and psychologists as assessors (Wendel & Joekel, 1991). During World War II, both the United States and the British used assessment centers as a selection tool for leader positions. After World War II, the most significant assessment center research was conducted by American Telephone and Telegraph Company (AT&T). These studies took place in the mid-1950s and demonstrated that the multiple techniques of the assessment

center method were successful in selecting future managers (Bray, 1982). The AT&T studies still are recognized today as the seminal empirical research studies on assessment centers (Wendel & Joekel, 1991).

The purpose of assessment centers can be separated into three domains: selection, development, and promotion. In selection centers, assessors are expected to provide overall performance ratings than single competency ratings, competencies that are used in the centers are not supposed to be those that can acquired or learned after selection or in a short period of time, also, legal issues are important in selection-based of centers. In developmental centers, assessors are expected to provide competency ratings for developmental information. Competencies and exercises in developmental centers are more varied, and a feedback session is added. In promotion centers, assessors are expected to provide competency ratings on more competencies and on more assessees, but fewer exercises are used in this kind of centers (Schmitt & Noe, 1983; Spychalski, et al., 1997).

Today assessment centers are widely used in a variety of organizations, it has been proved to be a useful selection tool in manufacturing companies (Klimoski & Brickner, 1987), utility companies (Norton, 1977), oil companies (Tumage & Muchinsky, 1982), and government agencies (Borman, Eaton, Bryan, & Rosse, 1983). They not only focus on selection, but also on promotion, development, training, career planning and talent identification (Spychalski, et al., 1997). A recent survey of assessment center practices in organizations found that 60.8% of the assessment centers have been utilized for promotion, 54.5% were used for selection, and 51.2% were used for development planning (Spychalski, et al., 1997). Most of empirical studies have shown that assessment

centers are used in thousands of organizations for selection and promotion of managers and executives, very few are used in subordinates. (Bray, 1982; McEvoy & Beatty, 1989; Thornton III & Byham, 1982)

Assessment centers work because they do a good job of measuring and integrating information regarding an individual's traits or qualities (Byham, 1980). Research examining the validity of assessment centers reports the mean predictive validity to be r =.407 on different types of performance predictors (Schmitt, Gooding, Noe, & Kirsch, 1984). A meta-analysis research reports predictive validities of job performance in between .37 and .43 (Hunter & Hunter, 1984). Other research also reports moderate to high predictive validity estimates for assessment centers (Cohen, 1980; Klimoski & Strickland, 1977).

Given the replicated meta-analytic results indicating assessment centers predict employees' and managers' future success, we would conclude that assessment centers are a useful tool for selection and would expect to see them more widely used. However, limitations have restricted its use. First, it takes time and money to develop an assessment center (Byham, 1980; Lance, 2008). In addition, assessment centers can usually only include 6 to 12 participants at one time because of the cost for assessors and space. Also, it is difficult to train assessors adequately for the process. For these reasons the assessment center method cannot be used by organizations with limited budgets or extremely large numbers of applicants (Caldwell, Thornton, & Gruys, 2003; McDaniel & Nguyen, 2001).

Assessment Centers in Education

While many assessment centers are developed for business settings, they are also used in educational settings, although not as widely. For example, Creighton University has developed a clinical assessment center to train competent and compassionate medical professionals (Medicine, 2010). Indiana University Northwest has implemented assessment centers for student development ("Assessment Center," 2009; *Indiana University Northwest Assessment Center Informational Booklet*, 2009). While these developmental assessment centers are being used, little empirical evidence has been gathered on assessment centers that serve the purpose of selecting prospective students in higher education. This may be because the 'job' for prospective students, on which the assessment is based, is a broad combination of tasks (*Indiana University Northwest Assessment Center Informational Booklet*, 2009). The developmental assessment centers used in education are more focused on one career area (i.e., medicine; or professional skills). Additionally, most of the assessment centers in educational settings are focused on the use for selecting educational administrators or for developmental purposes (Baker & McQuown, 1985; "Clinical assessment center," 2010; *Indiana University Northwest Assessment Center Informational Booklet*, 2009; Medicine, 2010).

Assessment center research conducted in The Netherlands for career-oriented selection shows that the predictive validity of the assessment center for salary is .55, which is considered as high in predictive validity. Also, 90% to 95% of the graduates went through the center have reported they had a good experience during the selection assessment center in terms of their future preparation (Jansen & Stoop, 1994). More assessment centers research has been conducted on student samples in The Netherlands, however, very few of these studies report the validity of the centers. Those who do report

validity evidence were calculated with relatively small sample sizes, which give us little clue about the effectiveness of the centers (Albers, 1992; Jansen & Stoop, 1994; Leest, Van, Nienhuis, & Wiersma, 1991).

Although there is not a lot of evidence for the effectiveness of assessment centers as a selection tool for a graduate program, it is foreseeable the assessment centers can give the students more than just good experience. It can also help them know which competencies to work on over the next school years. In this way, using an assessment center for graduate level students, can possibly serve both selection and developmental purposes.

Development and Implementation of Assessment Centers

When developing assessment centers, it is essential to know that assessment centers are job-specific. They have to start with knowing the tasks, knowledge, skills, and abilities of the targeted job. Based on the findings, assessment centers can be built. Not having a structured plan for development of one assessment center can result in ineffective centers which will provide inappropriate predictions (Byham, 1980; Gaugler & Thornton, 1989; Lance, 2008).

As previously mentioned, the best way to develop an assessment center for selection is to build around job-related dimensions (Byham, 1980), job-related dimensions can be understood as tasks, knowledge, skills, and abilities that are needed in a job. For example, a professor position may have dimensions like presentation skills, or subject knowledge ("O*NET: Dictionary of occupational titles," 2011). A manager's position may have dimensions like management or interpersonal relationship skills ("O*NET: Dictionary of occupational titles," 2011). Dimensions identified by a job

analysis must related to the core job activities; the exercises developed need to reflect the most common and significant job activities, and must incorporate the complexity and difficulty of the activities; finally, the established dimensions and behaviors need to be observable in the exercises. In this way, good performance on the exercise by an applicant will result in good performance on the exercise-related activity because of the assumption that a good performer on the exercise has the essential knowledge, abilities, and traits for the job (Byham, 1980).

Research has shown that the most popular exercises used in assessment centers include in-basket exercises, leaderless group discussions, simulations, problems analysis, presentations, fact-finding exercises, and skills and ability tests(Baker & McQuown, 1985; Jansen & Stoop, 1994; Norton, 1977; Silvester & Dykes, 2007; Spychalski, et al., 1997). Over 80% of assessment centers use in-basket exercises, and over 50% use leaderless group discussions and job simulations (Spychalski, et al., 1997). Some assessment centers include biodata measures, which may be collected using structured interviews , but little evidence for increased predictive validity of biodata information has been found in previous research (Klimoski & Brickner, 1987).

In the assessment centers that focus on student development, leaderless group discussion, case study, in-basket exercises, interview simulation, role-play, and oral presentation are the more popular exercises (*Indiana University Northwest Assessment Center Informational Booklet*, 2009; Jansen & Stoop, 1994; Waldman & Korbar, 2004). It is not surprising that most of the exercises in employee selection and student development overlap, since student development assessment centers tend to be career-oriented. Although the content of exercises is what differentiates assessment centers from

each other; each assessment center has different competencies that are based on the job

analysis of the targeted position(Byham, 1980). In other words, the same exercises can be

created focusing on different competencies, depending on the purpose of the assessment

center.

Aside from the competencies and exercises of assessment centers, assessors in the

assessment centers is another key to successful centers. In fact, trained assessors is one of

the requirements from the assessment center guidelines ("Guidelines and ethical

considerations for assessment center operations," 2009). Research has found that 48.5%

of the assessors are line managers, 25.6% are staff managers, and only 5.7% are

psychologists (Spychalski, et al., 1997). Interestingly, research also found psychologists

can provide more accurate and less biased ratings than mangers (Gaugler, Rosenthal, &

Thornton III, 1987); research even found industrial/organizational psychology students

can provide more accurate ratings than managers (Lievens, (in press); Lievens & Conway,

2001).

Importance of Content Validity

Content validity is the most popular type of validation method when developing

an assessment center (Byham, 1980; "Guidelines and ethical considerations for

assessment center operations," 2009; Sackett, 1987). One study of assessment center

practices in organizations found 89.7% of 215 organizations in U.S. reported assessment

center validity with content validation; 36.4% used predictive validation; and only 19.7%

used construct validation (Spychalski, et al., 1997). Content validity is a validation

method that uses Subject Matter Experts to examine whether the test content covers

representative sample of behavior domain (Kline, 2005), which also means the degree to

which the test scores are representative sample of behaviors to be exhibited in some performance domain (Schmitt & Noe, 1983). More specifically, expert judges evaluate the test content to ensure it is representative and appropriate.

Some suggest that content validity is inherent in the assessment center process when the situational exercises are developed, based on a thorough job analysis (Jaffee & Sefcik, 1980). For example, using expert ratings of behavior domains and performance domains can be one form of content validity. Another researcher has emphasized content validity is the best validation method for a work sample test like those used as exercises in an assessment center (Sackett, 1987). Other agree that a thorough job analysis is the basis of content validity, and content validity is the best way to present assessment center validation (Byham, 1980; Norton, 1977; Schmitt & Noe, 1983; Spychalski, et al., 1997). Hence, high-lighting the criticality of completing a job analysis when developing an assessment centers.

While content validity is frequently addressed in the assessment centers development or report, it is very rare to see an organization or a research paper going through and documented a complete job analysis procedure. Appropriate job analysis will provide assessment centers selection system essential job related dimensions to build the exercises that reflect the targeted job (Byham, 1980). In some cases, the courts found it easy to strike down assessment centers that did not follow the guidelines of EEOC and International Task Force of thorough job analysis (Schmitt & Noe, 1983); hence, it is important for assessment centers designers to document each step in the development of assessment center (Haymaker & Grant, 1982). Nevertheless, one of the most common mistakes an organization might face when using an assessment center is inadequate job

analysis, which save the organization money and time in exchange of invalid behavior dimensions, and ineffective exercises that do not reflect the targeted job (Byham, 1980; Sackett, 1987).

In order to successfully defend the content validation in a trial (Schmitt & Noe, 1983), researchers conclude from a large number of case reports and addressed that all the information should come from subject matter experts, and materials and records relating to the job, and every job analysis and test preparation should be documented. Moreover, KSAs used in the assessment center need to be representative of the job and must have a certain portion from the job analysis, these KSAs cannot include those can be acquired in a short time after selected. Finally, the use of abstract knowledge questions is unacceptable, and the cutoff scores have to based on competence to perform the job instead of customary practice or state law (Schmitt & Noe, 1983).

For a content-valid assessment center, job analysis is crucial to identify the frequency of job behavior and activities to develop the specific assessment center exercises. Many organizations often neglect the importance of job related exercises, if the assessment center is measuring the appropriate dimensions under wrong situations, it will provide inappropriate predictions (Byham, 1980; Caldwell, et al., 2003; Sackett, 1987; Schmitt & Noe, 1983).

To solve the concern in the lack of thorough job analysis of assessment center development, researchers published a job analysis model that contains nine steps to create a sound content validity (Haymaker & Grant, 1982), (1) Identification of job task content domain, (2) Refinement of job task content domain, (3) Identification of content domain of KSAs, (4) Refinement of content domain of KSAs, (5) Derivation and definition of

assessment center dimensions, (6) Affirmation of assessment center dimensions, (7)

Development of assessment center exercises, (8) Affirmation of the adequacy of

dimension behavior sampling, and (9) Standardization and assessor training. In their

conclusion, they discussed that some detailed steps, for example factor analysis in the

clustering KSAs, maybe unnecessary. Although it is a very thorough content validity

strategy, it may demand too much for the time and resources of an organization. For the

current study, I will adapt Haymaker and Grant's model with some modification based on

their conclusion for the job analysis (Haymaker & Grant, 1982).

Commonly, an assessor in the assessment center needs to observe multiple

assessees' behavior in multiple dimensions; these dimensions can be as many as 25 (P.

Sackett & Hakel, 1979). However, the limited numbers of items human beings can retain

in the working memory restrict assessors' ability to observe, classify dimensions, and

track the observed behaviors at the same time. A general solution for this problem is to

simplify the task by reducing the coding operation, which is to group behaviors and

decrease the number of dimensions that are used in each exercise (Gaugler & Thornton,

1989; Lievens & Conway, 2001) or reduce the assessees each assessor has to observe

(Melchers, Kleinmann, & Prinz, 2010). Research discovered that assessors who dealt

with fewer dimensions classified behaviors more accurately and less biased than those

who rated a larger number of dimensions. Assessors who observe fewer participants are

able to provide more accurate ratings that those observe more participants. For example,

one study found that assessors who rated 3 dimensions are more accurate than those who

rated 6 or 9 dimensions (Gaugler & Thornton, 1989).

Present Study

Given that assessment centers are a useful tool for managerial selection and development, it can be expected that they also would be good for selecting students has and would have high validity (Gaugler, et al., 1987; Jansen & Stoop, 1994). Because the goal of the Industrial/Organizational Psychology Program at Minnesota State University, Mankato is to train students to be scientist-practitioners, it is expected that an assessment center may also be useful for selecting prospective graduate students for the program. The present research will use Haymaker and Grant's job analysis model, using professors, current students, and alumni as subject matter experts to determine the effective competencies and behaviors that can be used for assessment center exercises; each exercise will have 3-4 competencies for assessors to accurately assess the participants.

Previously the graduate program conducted a job analysis for the graduate student 'position'. This job analysis determined the competencies and behaviors a student should have in the program. Competencies include the following: leadership, project management, technological proficiency, building relationships, communication, technical knowledge, and personnel effectiveness. Behavioral indicators for each competency are presented in the Appendix. Other researchers who focus on developmental assessment centers for student samples have used similar competencies such as interpersonal skills, critical thinking, team work, ethics, conflict management, presentation, customer service, etc. (Annen & Eggimann; *Indiana University Northwest Assessment Center Informational Booklet*, 2009).Some suggest consulting and business skills in I/O graduate education can be learned and schools should teach these competencies: communication, business development, and project management skills (Fink et al., 2010).

It is recommended that those competencies that can be learned after a student is selected should not be included in a selection assessment center (Schmitt & Noe, 1983). In other words if it can be trained, do not select on it. It may be that some of the competencies previously identified for the MSU I/O program can be learned during the school years, while others are behaviors that will help the students be more successful in the program and the future. For example, technical knowledge is a competency that can be learned, but there is some pre-existing knowledge that would be beneficial (i.e., undergraduate degree in psychology). On the other hand, leadership is a behavior that is more likely to be acquired during the graduate program.

For the current study it is expected that Subject Matter Experts will be able identify those competencies and behaviors that should be developed before admission to the graduate program separately from those to be learned after selected in the program. In addition subject matter experts should be able to identify assessment center exercises that are appropriate for selection applicant to the program.

Hypotheses

Hypothesis1: Subject Matter Experts will rate those tasks and competencies previously identified as more essential for graduate student performance higher than other behaviors and competencies.

Hypothesis2: Subject Matter Experts will rate competencies to be developed during the program lower than those necessary to have at the time students are selected for admission to the I/O program.

Hypothesis 3: Exercises that are more appropriate and representative for student selection into the MSU, Mankato I/O graduate program will be rated more highly by Subject Matter Experts than those more appropriate for development.

Method

One-hundred and forty-four survey invitations were sent out through an online survey software program. Four were sent to current professors, 25 to current students, and 115 to alumni of the Minnesota State University-Mankato, I/O Psychology program. These individuals served as subject matter experts and provided expert ratings of the competencies and behaviors that I/O students should have before being admitted to the program and those that should be developed during a student's time in the program. Participants also provided ratings of appropriate and effective assessment center exercises. Only 44 Subject Matter Experts responded the survey, thus the response rate was 31%. Among the SMEs that responded, 1 was a current professor, 19 were current students, and 24 were alumni. There were 11 missing values in the first part of the question, and 25 missing values in the second part of the question.

Procedures and Measures

Following the previous results of competencies of I/O students, the present study combined the competencies and behavior markers that were found on other research and student-related assessment centers. A questionnaire with all the tentative competencies was sent to all the Subject Matter Experts, asking them two questions for each competency: (1) the importance of the KSAs for use by the I/O program, (2) whether each competency is more appropriate for selection or development. Importance was judged on a four-point scale in which the competency was described as *(1) not necessary*

or useful, (2) useful but not necessary or essential, (3) necessary but not essential as other skills, (4) essential. Whether the competencies are more appropriate for selection or development will be determined between selection and development.

After key competencies are determined through the results from the questionnaire, the outline of different exercises were designed based on the life, competencies, and behaviors as an I/O student in MSU-Mankato, then, another questionnaire with the exercise-development information, (i.e. the content of the exercises and the competencies that are used in the exercise), were sent to professors and current students to decide which exercises are more appropriate and representative for selecting the prospective students into the MSU-Mankato, I/O psychology program. The appropriateness of the exercises was judged on a three-point scale in which *(1) representative and appropriate for selection, (2) representative but not appropriate for selection, (3) not representative or appropriate for selection.*

Results

Hypotheses 1 and 2

The first survey question was, "How important is each competency for student success in the I/O psychology program at MSU, Mankato?" Responses for this question are used to assess Hypothesis 1. The competencies in this survey question included those previously identified by the I/O psychology program and those that were found from other research on student-related assessment centers (Appendix 2). The original 4-point scale was *(1) not necessary or useful, (2) useful but not necessary or essential, (3) necessary but not essential as other skills, (4) essential.* However, after discussions with SMEs, I combined the third and the fourth point together since "necessary" is enough for

student success in I/O Psychology program. Each competency was determined as important for student success if over 50% of the SMEs agreed it is necessary. The same method was applied to the second question.

If more then half of the group, the majority of the group, has agreed on the same competency, it is reasonable to conclude that the whole group has made the decision. Majority decision is a very common type of decision method in selecting competencies and exercises in when developing assessment centers.

Analyses of hypothesis 1 revealed that only 6 out of 50 pre-identified competencies were not selected as necessary for student success in the I/O Psychology program. The six competencies not chosen were: collects information on client's organizational structure/philosophy; knowledge of professional organizations associated with I/O Psychology; maintains and uses a professional network; responds to e-mail quickly; displays a positive attitude towards learning new material; and seeks feedback on classwork.

To test hypothesis 2, the following survey question was analyzed: " Is this competency more appropriate for selection or development?" The results indicate competencies related to technological proficiency and technical knowledge were not identified for selection purpose, except for *demonstrates a basic understanding of statistical methods*. Competencies related to technological proficiency were the following: Learns new software on an as-needed basis in order to complete projects; capable of using a major statistical software package; uses technology to aid the presentation of data and assignments; capable of using online software; and creates effective PowerPoint presentation for clients/classmates. Competencies related to

technical knowledge were: displays an understanding of knowledge relevant to class; conducts logical research to solve problems; creates surveys practicing principles of good psychometrics; and demonstrates a basic understanding of statistical methods.

To identify those competencies selected for assessment center design responses chosen were those selected as both necessary and appropriate for selection. Results of the analyses of hypothesis 2 indicate 40 out of 85 total competencies were selected by SMEs as necessary for student success in the program and can serve as competencies for selection. Due to overlapping content of the competencies, ultimately 35 out of these 40 competencies were finalized as those to be used in the assessment center design. These 35 competencies were then classified into 5 dimensions based on their characteristics, which were leadership, project management, building relationship, communication, and personal effectiveness (Appendix 3).

Development of Assessment Center Exercises

Based on the five dimensions and 35 competencies that were endorsed by the SMEs and on suggestions from previous researchers (e.g.,Spychalski, et al., 1997), five different assessment center exercises were developed to elicit the dimensions and competencies from applicants. These exercise are In-basket exercise, Leaderless group discussion, Relationship role-play, Conflict role-play, and Presentation. Each exercise developed is described in the paragraphs below.

The In-basket exercise was designed to have applicants experience the position of first year I/O Psychology student, and balance several demands. They will receive a list of tasks, which include homework, team project work, social gatherings, exams, consulting projects, and graduate assistantship work. Applicants are, then, asked to

prioritize the tasks in detail in written format. Dimensions assessed in this exercise are project management, communication, and personal effectiveness (Appendix 4).

For the second exercise, Leaderless group discussion, applicants are asked to function as a team member in a project group. Prior to the group discussion, they will listen in on a phone conference with a client to determine the client's need. Then, participants will have to work as team to finalize the project for the client in a timely manner. Dimensions assessed in this exercise are leadership, project management, building relationships, and communication (Appendix 5).

In the Relationship exercise, applicants are asked to role-play as a team leader of a consulting project in which one team member is having performance trouble. Applicants will have to face the member, role-played by one of the judges, and find out the problem. Dimensions assessed in this exercise are leadership, building relationships, and communication (Appendix 6).

The fourth exercise is a conflict role-play. In this exercise, applicants are asked to play the role of a project team member who has been not included in the project. Applicants are required to confront the project leader, who is role-played by one of the judges, talk through the problem and express their disappointment. Dimensions assessed in this exercise are building relationships, communication, and personal effectiveness (Appendix 7).

The last exercise is Presentation. For this exercise, applicants are asked to present the results from the Leaderless group discussion individually. Applicants will have some time to prepare a presentation, then will present to the judges. Dimensions assessed in this exercise are Leadership, communication, and personal effectiveness (Appendix 8).

Hypothesis 3

Following development of the exercises, questionnaires were distributed to 24 SMEs. Two current professors and 22 current students functioned as SMEs, the response rate for the questionnaire was 100%.

Five questions asked participants to rate the representativeness and appropriateness of each assessment center exercise for applicant selection. A 3-point scale was used with *(1) representative and appropriate for selection, (2) representative but not appropriate for selection, (3) not representative or appropriate for selection.* The assessment center exercise will recommended for use by the graduate program if over 50% of the SMEs agreed that the exercise is representative and appropriate for selection. According to the results of this questionnaire, all of the five assessment center exercises are representative and appropriate for applicant selection for I/O Psychology program.

For the first exercise, In-basket exercise, 75% of the SMEs agreed that it was representative and appropriate for selection. For the second exercise, Leaderless group discussion, 54.2% of the SMEs agreed that it was representative and appropriate for selection. For the third exercise, Relationship, 62.5% of the SMEs agreed that it was representative and appropriate for selection. For the fourth exercise, Conflict, 54.2% of the SMEs agreed that it was representative and appropriate for selection. For the last exercise, Presentation, 65.2% of the SMEs agreed that it was representative and appropriate for selection (Appendix 9).

Discussion

Previous research has shown the assessment center method has been designed and utilized as a selection tool for decades in military and business settings; however, it has rarely been implemented in educational settings. The purpose of this research is to examine the feasibility of developing a selection-based assessment center for applicants to a graduate program in industrial-organizational psychology.

Based on the results of the question, "How important is each competency for student success in the I/O psychology program at MSU, Mankato?" There are 6 competencies that were not selected by SMEs as necessary for student success in the I/O Psychology program. Hence, Hypothesis1: Subject Matter Experts will rate those tasks and competencies previously identified as more essential for graduate student performance higher than other behaviors and competencies, was not supported.

The competencies that were not selected by SMEs include: collects information on client's organizational structure/philosophy; knowledge of professional organizations associated with I/O Psychology; maintains and uses a professional network; responds to e-mail quickly; displays a positive attitude towards learning new material; and seeks feedback on classwork. Collects information on client's organizational structure/philosophy was originally classified as project management; knowledge of professional organizations associated with I/O Psychology, and maintains and uses a professional network were classified as building relationship. Although they were classified as different dimensions, they were focused on clients and relationship building outside of the academic environment. The remaining three unselected competencies were all classified under the personal effectiveness dimension (Appendix 1 & 3). A possible reason for this might be the situation of the program has been shifting. Each year there is

a group difference between each class, although the main culture of the program maintain stable, for example, scientific-practitioner oriented, close relationship with professors, students and alumni, but some situations can be changed gradually, for example, due to the economy perhaps consulting opportunities were not available for students to practice these competencies, hence, they never realized that it is important for student success in the program. Another reason may be that the OERG has established a group of stable clients that students no longer need to spend time and effort to understand the culture of the clients; instead, they can find the information from the professors.

Thirty-five out of 80 competencies were finalized as the competencies to be used for assessment center design and were classified into 5 dimensions: leadership, project management, building relationship, communication, and personal effectiveness. Competencies under these 5 dimensions are personal traits that were formed through experience and time. These competencies can serve as selection purpose because they are not likely to change during the two years of the program. With only one exception, none of them were originally classified under technological proficiency or technical knowledge, which can be developed and learned during the school years. This exception was demonstrates basic understanding of statistical methods, which make sense that SMEs think it is important for selection, because statistics is a key learning area in the I/O Psychology program. If one can't show that one has basic understanding of statistics methods, he/she will have hard time learning advanced level of master statistics methods in I/O Psychology program.

SMEs have successfully picked those competencies that are important for selection; hence, Hypothesis2: Subject Matter Experts will rate competencies to be

developed during the program lower than those necessary to have at the time students are selected for admission to the I/O program, was supported.

Based on the results of the second questionnaire, "the representativeness and appropriateness of each assessment center exercise for applicant selection". All five exercises were agreed by SMEs to work as selection exercises. Some of the exercises are designed for developmental purpose, for example, Conflict and Presentation were designed for developmental purpose; yet, SMEs still think all of the exercises are appropriate for selection. Hence, Hypothesis 3: Exercises that are more appropriate and representative for student selection into the MSU, Mankato I/O graduate program will be rated more appropriate and resprisentative by Subject Matter Experts than those more appropriate for development, was not supported.

 A possible reason for this is that most of the SMEs were current students and most of them have no experience with assessment centers. It can be hard for them to distinguish the difference between purpose for selection and development with only a few minutes of verbal explanation of the differences.

However, suggestions were recommended by SMEs that some of the exercises like In-basket and Presentation should have more time for applicants to prepare; another concern is that exercises might be too extreme for a master program applicant to role-play; although all the exercises are based on students' true experience, for selection purpose they might be too difficult for applicants to perform, even worse, they might scare the applicants away because of the negative emotion about the selection processes.

One limitation of this research is the distribution of the SMEs, there are fewer professors than students available to respond to this survey. However, in this research, the

researcher didn't put any extra weights on professors' responses. If weights were put on professors' respond and calculated, more accurate competencies and exercises may be selected.

Another limitation for this research is the SMEs training. This research assumed that people familiar with the program would understand what is assessment center, the purpose and function of the assessment center, and the difference between selection and developmental assessment centers; therefore, this research only briefly described these concepts to the SMEs when it comes to SMEs judging session. Based on the feedback from the SMEs, they had hard time distinguishing the difference between selection and developmental competencies and exercises. If a training session about the assessment centers and how to distinguish the difference between selection and development was implemented before the SMEs judging session, it is possible that SMEs might be better able to judge the competencies and exercises.

European countries, like the Netherlands, have been using assessment centers as selection tools for students for years, and have reported many positive results using assessment centers in this way. Yet, in the U.S. this method has rarely been used for student selection. The results of this research have proven a possibility for the U.S. education facilities to consider using assessment center as an alternate tool to select higher-level education scholars. With proper SMEs, it is possible to identify the competencies and incidence that a student needs or may encounter in certain program that are appropriate for selection function. With those, assessment center exercises can be developed, examined, and modified based on the feedback from the SMEs.

This research using students, professors, and alumni as SMEs has successfully identified the necessary and appropriate competencies for student selection in assessment center. It highlights the possibility of finding the right competencies for students in a certain program. Competencies a student need maybe general and broad, but when these competencies are viewed with the culture of the program, they can be specified.

With slight modification of the exercises, this research has shown assessment center exercises are actually qualified as a selection tool for I/O Psychology program at MSU, Mankato. For example, extending the preparation and answering time frame of the In-basket exercise from 45 minutes to a longer time period may help applicants have time to think through all the tasks and provide the appropriate response. It is very important for the students selected into the program have the ability to manage their time and prior their duties; hence, In-basket can be a potential selection exercise for the program.

Considering the relationship exercise, perhaps one should consider lowering the difficulty of the situation, making it less extreme. For example, changing the cancer situation to a boyfriend and girlfriend break up situation and/or take out the upcoming exam to simplify the difficulty so that applicants won't feel such intensity. Relationships in I/O Psychology program are very close and cohesive. It is important that these exercises can be adequately used to select the right person that fits in the culture and may function well under such environments.

Although Leaderless group discussion, Conflict, and Presentation may not function well as selection exercises, they are not redundant. These exercises can function as developmental exercise even without any modification. With developmental exercises, the difficulties of the situations are usually more intense than selection. Considering these

three exercises already have extreme situations, they are perfect for a developmental purpose. I/O Psychology program can implement these exercises in the middle of the school year as one of the source for the yearly feedback session. First year students will have another year to work on their deficiencies, and second year students can take the results to their future careers as a direction for future improvement.

Overall, the results of this research have revealed a potential selection and developmental method for education in higher-levels. This method combines the competencies and personality traits a program needs, recommends ways to select those applicants who are professionally qualified and culturally fit in; and helps to develop the students with higher competence and better self-awareness. Future research in this area can further examine the predictive and incremental validity of the method to make it more statistically solid. In addition, expanding the sample to other programs can test the generalizability and feasibility of this method applied to other situations. In Europe this is a developed area, but in U.S. it is still an area waiting to be discovered and tested.

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Appendix 1
Competencies and Behaviors pre-identified by the I/O Program

Leadership	Earns other's trust and respect
	Admits mistakes and quickly corrects them
	Leads by example
	Demonstrates energy and enthusiasm for the project
	Displays confidence and certainty
Project Management	Effectively works within a team to accomplish tasks
	Meets client demands in a timely manner
	The ability to organize the information
	The ability to think through possible implications before making decisions
	The ability to plan and organize works and tasks to meet deadlines
	Prioritizes tasks to meet deadlines
Building Relationship	Seeks to understand the perspective of people with different opinions
	Treats others with respect
	Positively influences others' attitudes and behaviors
	Effectively deals with conflicts among peers and in group
	Offer assistance to other students when needed
	Display interests in people
	The ability to impress people and leave good memories on them
Communication	Communicates clearly, fluently, and succinctly
	Actively listens to others
	Freely exchange knowledge, ideas and experiences to fellow students
	Writes clearly-formatting ideas in a concise, understandable way
	The ability to orally communicate facts to others
	The ability to gather facts from written materials
	Able to recall details reading, listening, or talking
	The ability to obtain facts from other through oral communication
Personal effectiveness	Seeks to perform beyond expectations of his/her role
	Uses logical deductions to make decisions
	Remains calm in stressful situations
	Recognizes opportunities for improvement
	Exhibits the ability to work in an ambiguous environment
	The ability to make the best judgment in a timely manner
	Highly self-motivated
	The ability to follow orders and directions
	Displays good ethics

Appendix2

Competencies used in the first questionnaire
Question1: How important is each competency for student success in the I/O psychology program at MSU, Mankato?
Question2: Is this competency more appropriate for selection or development?

Competencies	Suc	Sel	Dvp
Position self as a leader	X		X
Clearly communicates expectations of others	X		X
Earns other's trust and respect	X	X	
Admits mistakes and quickly corrects them	X	X	
Builds a consensus when making decisions	X		X
Leads by example	X	X	
Demonstrates energy and enthusiasm for the project	X	X	
Effectively works within a team to accomplish tasks	X	X	
Translates complex findings into understandable terms	X		X
Analyzes data for project-specific purposes	X		X
Develops detailed project plan	X		X
Collects information on client's organizational structure/philosophy			X
Creates detailed proposals to be represented to clients	X		X
Meets client demands in a timely manner	X	X	
Deeply understands clients' needs	X		X
Anticipates clients' needs	X		X
Learns new software on an as needed basis in order to complete projects	X		X
Capable of using a major statistical software package	X		X
Use technology to aid the presentation of data and assignments	X		X
Capable of using online survey software	X		X
Creates effective PPT presentation for client/classmates	X		X
Knowledge of professional organizations associated with I/O Psychology			X
Seeks to understand the perspective of people with different opinions	X	X	
Treats others with respect	X	X	
Positively influences others' attitudes and behaviors	X	X	
Effectively deals with conflicts among peers and in group	X	X	
Offer assistance to other students when needed	X	X	
Maintains and uses a professional network			X
Participates in social gathers to develop personal and professional relationships	X		X
Communicates clearly, fluently, and succinctly	X	X	
Delivers engaging presentation	X		X
Actively listens to others	X	X	
Contributes valuable information during class discussions	X		X

Freely exchange knowledge, ideas and experiences to fellow students	X	X	
Writes clearly-formatting ideas in a concise, understandable way	X	X	
Defends and supports proposals using compelling evidence	X		X
Displays an understanding of knowledge relevant to class	X		X
Conducts logical research to solve problems	X		X
Creates surveys practicing principles of good psychometrics	X		X
Demonstrates a basic understanding of statistical methods	X	X	
Respond to email quickly		X	
Seeks to perform beyond expectations of his/her role	X	X	
Uses logical deductions to make decisions	X	X	
Remains calm in stressful situations	X	X	
Develops creative solutions to difficult problems	X		X
Recognizes opportunities for improvement	X	X	
Displays a positive attitude towards learning new material		X	
Exhibits the ability to work in an ambiguous environment	X	X	
Seeks feedback on class work		X	
Prioritizes tasks to meet deadlines	X	X	
The ability to analyze the problem properly	X		X
The ability to make the best judgment in a timely manner	X	X	
The ability to gather enough information before making a judgment	X		X
The ability to organize he information	X	X	
The ability to assign proper tasks or role for team member	X		X
The ability to make decision based on limited information	X		X
The ability to make quick decision	X		X
The ability to think through possible implications before making decisions	X	X	
The ability to display several different interests		X	
Highly self-motivated	X	X	
High stress tolerance	X	X	
Display interests in people	X	X	
The ability to orally communicate facts to others	X	X	
The ability to plan and organize works	X	X	
The ability to gather facts from written materials	X	X	
The ability to obtain facts from other through oral communication	X	X	
Display initiative	X	X	
Perceiving and reacting sensitively to others		X	
The ability to function effectively under stress	X	X	
The knowledge of business related laws			X
The ability to effectively supervise others			X

The ability to follow orders and directions	X	X	
Delegate responsibility	X		X
The ability to assign priority to works	X	X	
The knowledge of proper writing procedures	X		X
Displays confidence and certainty	X	X	
Able to recall details reading, listening, or talking	X	X	
Able to keep good customer relation	X		X
The ability to manage conflict	X		X
Able to maintain a harmonious team work environment	X		X
Display good ethics	X	X	
Knowledge if business writing and presentation	X		X
The skills to influence and persuade people	X		X
The ability to impress people and leave good memories on them	X	X	
Display a good memory of people's face and name			X

*Suc=success; Sel=selection; Dvp=development
X represents the majority choice of the SMEs

Appendix 3

Final competencies and dimensions

Leadership	Earns other's trust and respect
	Admits mistakes and quickly corrects them
	Leads by example
	Demonstrates energy and enthusiasm for the project
	Displays confidence and certainty
Project Management	Effectively works within a team to accomplish tasks
	Meets client demands in a timely manner
	The ability to organize the information
	The ability to think through possible implications before making decisions
	The ability to plan and organize works and tasks to meet deadlines
	Prioritizes tasks to meet deadlines
Building Relationship	Seeks to understand the perspective of people with different opinions
	Treats others with respect
	Positively influences others' attitudes and behaviors
	Effectively deals with conflicts among peers and in group
	Offer assistance to other students when needed
	Display interests in people
	The ability to impress people and leave good memories on them
Communication	Communicates clearly, fluently, and succinctly
	Actively listens to others
	Freely exchange knowledge, ideas and experiences to fellow students
	Writes clearly-formatting ideas in a concise, understandable way
	The ability to orally communicate facts to others
	The ability to gather facts from written materials
	Able to recall details reading, listening, or talking
	The ability to obtain facts from other through oral communication
Personal effectiveness	Seeks to perform beyond expectations of his/her role
	Uses logical deductions to make decisions
	Remains calm in stressful situations
	Recognizes opportunities for improvement
	Exhibits the ability to work in an ambiguous environment
	The ability to make the best judgment in a timely manner
	Highly self-motivated
	The ability to follow orders and directions
	Displays good ethics

Appendix 4
Assessment Center Exercise-In Basket

Participant Instruction

In this exercise, you will be asked to assume the role of a first year student in the MSU, Mankato I/O Psychology program. You will be presented with a class schedule, letters, notes, memos, and telephone messages. You must read these materials and then outline your strategies for solving problems, making decisions, developing plans, evaluating progress, delegating responsibilities, setting priorities, and informing others.

Based on your answers, you will be judged on three dimensions: project management, communication, and personal effectiveness. Competencies in project management include the ability to organize information; the ability to think through possible implications before making decisions; the ability to prioritize tasks; and the ability to plan and organize works and tasks to meet the deadlines. Competencies in communication are the ability to write clearly-formatting ideas in a concise understandable way, and the ability to gather facts from written materials. Competencies in the personal effectiveness are the ability to use logical deductions to make decisions; the ability to make the best judgment in a timely manner; the ability to follow orders and directions; and displays good ethics.

Your Role

You are Casey Jones, a first year student in the I/O Psychology program. In your role as a student in the program, you not only required to be a student but you also are required to work as an associate consultant in the OERG, the student-led consulting group. Moreover, this program expects you to be able to achieve a balance in academic, work, and social life.

First semester is always the busiest semester of the program, you have class from 10:00 am to 2:45 pm every Monday; from 9:00 am to 11:00 am every Tuesday; from 10:00 am to 2:45 pm and 6:00pm to 10:00 pm every Wednesday; and from 9:00 am to 11:00 am every Thursday. Your class schedule is below.

Class Schedule	Monday	Tuesday	Wednesday	Thursday	Friday
8:00-9:00 am					
9:00-10:00 am		Statistics		Statistics	
10:00-11:00 am	Psychometric Theory		Psychometric Theory		
11:00-12:00 am					
12:00-1:00 pm					
1:00-2:00 pm	Job Analysis		Job Analysis		
2:00-3:00 pm					
3:00-4:00 pm					

4:00-5:00 pm					
5:00-6:00 pm					
6:00-7:00 pm			**Motivation**		
7:00-8:00 pm					
8:00-9:00 pm					
9:00-10:00 pm					

Today is Tuesday,

1. You have just received an e-mail about a new work project (OERG) from the Director of the program that is due on Friday. This project will take you about 20 hours to complete, you have been waiting for this opportunity since you came to the program, you really don't want to give up this opportunity.
2. Meanwhile, you have another work project that you are working on with other classmates, which will take you 1 hour and 30 minutes to finish. Your plan is to meet on Friday at 1:00 pm. At that time, you will have a phone meeting with the client who will tell you his/her expectations for the project.
3. In addition to your OERG consultant duties, as a student, there are two huge exams that are coming up next Monday and Wednesday, Psychometric Theory and Job Analysis. Because you have been busy with the projects, you still need at least another 8 hours to study both of these subjects.
4. Saturday you have a group meeting with your classmates for a class project. It is one of the most important projects for the course and counts toward 40% of your final grade. Although the due date is two weeks later, your group still has to do some research and writing to catch up. This meeting will take you about 3 hours.
5. Wednesday fun night is a tradition in the program. Everyone in the program goes to the selected place have fun and talk to each other. It usually lasts from 8:00 pm to 12:00 am. This week one of our successful alumni is coming back to join the Wednesday fun night. This is a great opportunity to know the alumnus and, thinking toward your future, you definitely don't want to miss the night.
6. In order to support your spending while you are a student, you also work as a graduate assistant in one of the administration offices for 20 hours every week. This week you have already done 8 hours, your schedule for the rest of the week is 4 hours for each of the coming weekdays. You feel like it's too late to ask your supervisor for a schedule change.

E-mail from the Director of the program
Date: Tuesday, March 6th

From: Dan Sachau, Director of I/O Psychology

To: Casey Jones

Hey,

Here's a project for you. A Mankato radio station needs a customer satisfaction survey and report as a basis for their service improvement. It is a very good opportunity for you. They already have a satisfaction survey, all we need to do is send it out, write a technical report and present the results to them. We can talk tomorrow.

Dan

E-mail from the client of OERG
Date: Tuesday, March 6th

From: Tara Smith, Human Resource Manager, Safari College.

To: Casey Jones

Hi Casey,

I heard you have conducted focus groups for Safari College, I wonder if I can set up a meeting with the team and talk over some of Safari's expectations for the project.

Regards,
Tara

E-mail from the lieutenant of the program
Date: Tuesday, March 6th

From: Pei See Ng, Lieutenant, OERG

To: Professors, First years, Second years

Hey everyone,

This Wednesday fun night we are going to our favorite place American Legion with one of our successful alumni Malia!

Hope to see you all there
Pei See

What you need to do
In order to successfully manage your time, you need to come up a step-by-step reasonable action plan that you follow; given the situation you are facing right now. This action plan needs to be thorough and specific with date, time, and content in place.

Observer Instruction

This is an in-basket exercise, in this exercise participants are acting as a role of Casey Jones, who is a first year student in Minnesota State University, Mankato Industrial/Organizational Psychology program. Participants are asked to prioritize the tasks they are facing thoroughly and specifically, which includes work projects, school projects, meetings, exams, graduate assistantship, and social life. Moreover, they are expected to answer some questions regarding to the tasks. Participants will have 45 minutes to read and write down their answers, all the answers will be presented in the written format.

Your role as an observer is to judge the content of the answer written by each participant. The answer of this exercise should be judged based on three dimensions, **project management**, **communication**, and **personal effectiveness**. Competencies in project management include the ability to organize information; the ability to think thorough possible implications before make decisions; prioritize tasks to meet the deadlines; and the ability to plan and organize works and tasks to meet the deadlines. Competencies in the communication are writes clearly-formatting ideas in a concise; understandable way, and the ability to gather facts from written materials. Competencies in the personal effectiveness are use logical deductions to make decisions; the ability to make the best judgment in a timely manner; the ability to follow orders and directions; and displays good ethics.

Dimensions and Competencies used in the Exercise

Project Management	The ability to organize the information
	The ability to think through possible implications before make decisions
	Prioritizes tasks to meet the deadlines
	The ability to plan and organize works and tasks to meet deadlines
Communication	Writes clearly-formatting ideas in a concise, understandable way
	The ability to gather facts from written materials
Personal effectiveness	Uses logical deductions to make decisions
	The ability to make the best judgment in a timely manner
	The ability to follow orders and directions
	Displays good ethics

Appendix 5
Assessment Center Exercise-Leaderless Group Discussion

In this exercise you will be assigned to a team of 3-4 team members, you will have 30 minutes to speak with a client on the phone. After that, your team will have one hour to finish the project and meet the client's needs.

You will be judged on four dimensions: leadership, project management, building relationships, and communication. Competencies in leadership are: earns other's trust and respect; admits mistakes and quickly corrects them; leads by example; demonstrates energy and enthusiasm for the project; displays confidence and certainty. Competencies in project management are effectively works within a team to accomplish tasks; meets client demands in a timely manner; organizes information; the ability to think through possible implications before making decisions; plans and organizes work and tasks to meet deadlines; prioritizes tasks to meet deadlines. Competencies in building relationship are: seeks to understand the perspective of people with different options; treats others with respect; positively influences others' attitudes and behaviors; effectively deals with conflicts among peers and in group; offer assistance to other students when needed; display interests in people; and impresses people and leaves good memories on them. Competencies in communication are communicates clearly, fluently, and succinctly; actively listens to others; freely exchanges knowledge, ideas, and experience to fellow students; writes clearly-formatting ideas in a concise, understandable way; orally communicates facts to others; gathers facts from written materials; recalls details through reading, listening, or talking; obtains facts from others through oral communication.

Your Role

You are a member of an OERG project team. The purpose of this team is to consult with the client and understand the client's needs. Today, your team is having a phone conference with the client to finalize the needs of the client for this project. After the conference call, your team will work on the project and complete it.

Prior to this meeting, there were few focus groups that gathered all the information you need for this project. Although you were not able to attend the focus group because of some personal reasons, your classmates have helped you and tracked notes for you.

Your team will need to analyze the notes, and based on the needs from the client, create and report back to the client.

Role-play Information

You are a client of the OERG, Tara Smith, a Human Resource Manager of Safari College that only offers online courses and credits. Safari College is a newly founded college that is located in the center of Minneapolis, MN. Their mission is to provide

convenient, high quality, and low cost online courses for people that can't go to school on a regular class schedule but at the same time want to develop themselves more.

Lately Safari College is having trouble with their enrollment rate; however, according to their previous analytic information, 75% of their previous survey participants are willing to enroll in a college like Safari that offers flexibly scheduled classes. The board of the college is thinking that Safari is not offering the "right" courses that people really want or need. They decide to have you make a phone call to OERG and have them figure out what kind of courses are the "right" courses that can increase the enrollment rate of Safari.

You called OERG about a month ago and told them what the board thought. They have formed a project team and decided to hold several focus groups about what kind of courses people really need. Today, you are having a phone meeting with the group, you plan to tell them your expectation of the project. Safari College would like to know the answer of some specific questions. (1) What are the most popular courses that people are looking for? (2) What will be the most popular courses in the next 2-5 years? (3) Besides the normal lecture style, what are other possibilities that online courses can offer?

Observer Information

This is a leaderless group discussion exercise, the participants are acting as a member of an OERG project. Participants are expected to cooperate together on this project, they will have 30 minutes to talk to the client, and then, an hour to analyze the information they have and to create a report and plan of next action for the client.

Your role as an observer is to judge participant's behavior based on four dimensions: **leadership, project management, building relationships, and communication**. Competencies in the leadership area include: earns other's trust and respect; admits mistakes and quickly corrects them; leads by example; demonstrates energy and enthusiasm for the project; displays confidence and certainty. Competencies in the project management are effectively works within a team to accomplish tasks; meets client demands in a timely manner; the ability to organize the information; the ability to think through possible implications before making decisions; the ability to plan and organize works and tasks to meet deadlines; prioritizes tasks to meet deadlines. Competencies in building relationship are seeks to understand the perspective of people with different options; treats others with respect; positively influence others' attitudes and behaviors; effectively deals with conflicts among peers and in group; offer assistance to other students when needed; display interests in people; and the ability to impress people and leave good memories on them. Competencies in communication are communicates clearly, fluently, and succinctly; actively listens to others; freely exchange knowledge, ideas, and experience to fellow students; writes clearly-formatting ideas in a concise,

understandable way; the ability to orally communicate facts to others; the ability to gather facts from written materials; able to recall details thorough reading, listening, or talking; and the ability to obtain facts from others thorough oral communication.

Dimensions and Competencies used in the exercise

Leadership	Earns other's trust and respect
	Admits mistakes and quickly corrects them
	Leads by example
	Demonstrates energy and enthusiasm for the project
	Displays confidence and certainty
Project Management	Effectively works within a team to accomplish tasks
	Meets client demands in a timely manner
	The ability to organize the information
	The ability to think through possible implications before making decisions
	The ability to plan and organize works and tasks to meet deadlines
	Prioritizes tasks to meet deadlines
Building Relationship	Seeks to understand the perspective of people with different opinions
	Treats others with respect
	Positively influences others' attitudes and behaviors
	Effectively deals with conflicts among peers and in group
	Offer assistance to other students when needed
	Display interests in people
	The ability to impress people and leave good memories on them
Communication	Communicates clearly, fluently, and succinctly
	Actively listens to others
	Freely exchange knowledge, ideas and experiences to fellow students
	Writes clearly-formatting ideas in a concise, understandable way
	The ability to orally communicate facts to others
	The ability to gather facts from written materials
	Able to recall details reading, listening, or talking
	The ability to obtain facts from other through oral communication

Appendix 6
Assessment Center Exercise: Relationships

Participant Information

In this exercise you will be asked to act as project leader of an OERG project. You will be presented with a scenario that contains the role-play information you are going to portray. You have 20 minutes to read thorough the scenario, and prepare yourself, then you will have 30 minutes to perform in the role-play exercise.

You will be judge on three dimensions: leadership, building relationships, and communication. Competencies important for leadership are as follows: earns other's trust and respect, admits mistakes and quickly corrects them, demonstrates energy and enthusiasm for the project, and displays confidence and certainty. Competencies important for building relationships include seeks to understand the perspective of people with different opinions; treats others with respect; positively influences others' attitudes and behaviors; effectively deals with conflicts among peer and in group; offers assistance to other students when needed; and display interest in people. Competencies important for effective communication are as follows: communicates clearly, fluently, and succinctly; actively listens to others; freely exchanges knowledge, ideas and experience with fellow students; orally communicates facts to others; gathers facts from written materials; recalls details from reading, listening, or talking; and obtains facts from other through oral communication.

Your Role

You are Casey Jones, a project leader of an OERG project. This project has been taking a long time with the client constantly changing their mind about the direction of the project. Some of the work has already been revised more three times. Lately, one of your teammates, Cheran Tompson, is having trouble keeping up with the tasks that he/she should finish and has not been showing up on time for project meetings.

Cheran Thompson has been your good friend since both of you came to the program; you have the same interests and always spend times together. This is the first time you two have worked together on the same project. For the first few meetings, everything was good: Cheran showed up on time, was an active participant in the group discussion process, and finished his/her part of the work on time. However, lately you have noticed that Cheran's performance has decreased. He/She no longer shows up on time, sometimes even skips the meeting. During the meeting his/her laptop is always on facebook, or watching youtube videos, playing web games, and browsing CNN news. He/She does not join the discussion as frequently as before and sometimes interrupts with irrelevant news he/she just saw. Other team members have started to ignore or make fun of Cheran, making the atmosphere of the team very tense sometimes.

Most of the team members choose not to face the problem because they don't like confrontation, especially since they are also classmates that will see each other inside and outside of class. However, you believe there must be some reason that leads to Cheran's behavior. Today, you called Cheran to go for coffee just like usual. Today you plan to talk to Cheran about the behavior he/she has exhibited lately, but he/she isn't yet aware of these concerns.

Role Player Information

Your Role

You are Cheran Thompson, a first year student in the MSU, Mankato I/O Psychology program. You are a good friend of Casey Jones, who is the leader of an OERG project that you have been working on recently. You two have never worked with each other before, and you are very excited about this cooperation. You think working on the same project with your best friend may create an environment that is more relaxed and leads to more creativity and inspiration.

Considering these thoughts about the cooperation with Casey on the project, you are more engaged and motivated than any of the other members in the group. At first, you brought up all kinds of ideas and put in a lot of effort. Your enthusiasm made you willing to take responsibility of some difficult tasks; however, not all of your ideas and efforts were appreciated and approved by everyone else in the group. Even Casey sometimes did not support your ideas. Moreover, you noticed that it always take the whole team a long time to make a decision: everyone is not on the same page and does not share the same information. In addition, the client of this project constantly changes the direction of the project, which has forced you to redo many of the tasks over and over. All of these incidents have made you lose your faith and motivation in the project. You feel there is no point having more meetings on the project until the client has made up their mind about the direction of the project. You are frustrated and disappointed because no one appreciates your work. Everything about the project so far has not gone as you expected. You have lost concentration in the meetings and too pass the time you start checking facebook, watching youtube videos, playing web games, and browsing CNN news.

Although you had high motivation and expectations at the beginning of the project, and you took responsibility for some difficult tasks; you never considered how time-consuming these project tasks would be, and it has significantly interfered with your schoolwork. At first, you could handle all the tasks pretty well, since there was no major schoolwork in the first several weeks. But just two weeks ago, you realized that there are two upcoming exams, job analysis and psychometrics, which are both next week. You have had to shift a lot your time from working on the project to studying for these exams. That has caused you to not able to finish some of your tasks on time. However, you believe the clients will change their mind again sooner or later, and it is not important whether you finish your OERG project tasks on time or not.

Besides the OERG project, your parents called you two weeks ago and told you some devastating news: Your mother has been diagnosed with breast cancer. This news took your parents a long time to tell you, because they were afraid it would effect your school work and studying. They told you that it is in the early stages. Your mother will need to take some medication and go thorough chemotherapy, yet it is highly curable. Still, this news really makes you think about postponing your education and go home to spend time with your mother until she is fully recovered. You haven't told anyone about this news. You don't want to make people feel sorry for you, and you want to discuss this matter more with your parents and professors.

Observer Information

This is a role-play exercise. In this exercise, participants are asked to act as a project leader whose team member was doing good but has shown a decrease in performance lately. Participants are expected to read thorough the scenario gathering as much information as they can in order to find out what problems this team member is facing, and help this person solve the problem.

You role as an observer is to judge participant's behavior based on three dimensions: **leadership**, **building relationships**, and **communication**. Competencies important for leadership include the following: earns other's trust and respect; admits mistakes and quickly corrects them; demonstrates energy and enthusiasm for the project; and displays confidence and certainty. Competencies important for building relationships include: seeks to understand the perspective of people with different opinions; treats others with respect; positively influences others' attitudes and behaviors; effectively deals with conflicts among peer and in group; offers assistance to other students when needed; and displays interest in people. Competencies important for communication include the following: communicates clearly, fluently, and succinctly; actively listens to others; freely exchanges knowledge, ideas and experience to fellow students; orally communicates facts to others; gathers facts from written materials; recalls details from reading, listening, or talking; and obtains facts from others through oral communication.

Dimensions and Competencies used in the Exercise

Leadership	Earns other's trust and respect
	Admits mistakes and quickly corrects them
	Leads by example
	Demonstrates energy and enthusiasm for the project
	Displays confidence and certainty
Building Relationship	Seeks to understand the perspective of people with different opinions
	Treats others with respect
	Positively influences others' attitudes and behaviors
	Effectively deals with conflicts among peers and in group

	Offer assistance to other students when needed
	Display interests in people
Communication	Communicates clearly, fluently, and succinctly
	Actively listens to others
	Freely exchange knowledge, ideas and experiences to fellow students
	The ability to orally communicate facts to others
	The ability to gather facts from written materials
	Able to recall details reading, listening, or talking
	The ability to obtain facts from other through oral communication

Appendix 7
Assessment Center Exercise-Conflict

Participant Information

In this exercise you will be asked to act as a consultant on an OERG project. You will be presented with a scenario that contains the role-play information you are going to act. You have 20 minutes to read thorough the scenario, and prepare yourself. Then you will have 30 minutes to perform the role-play exercise.

You will be judged based on three dimensions: **building relationships**, **communication, and personal effectiveness**. Competencies important for building relationships include the following: seeks to understand the perspective of people with different opinions; treats others with respect; positively influences others' attitudes and behaviors; effectively deals with conflict among peer and in group; offers assistance to other students when needed; and displays interest in people. Competencies important for effective communication include the followoing: communicates clearly, fluently, and succinctly; actively listens to others; freely exchanges knowledge, ideas and experience to fellow students; orally communicates facts to others; gathers facts from written materials; recalls details from reading, listening, or talking; and obtains facts from other through oral communication. Competencies important for personal effectiveness are seeks to perform beyond expectations of his/her role; uses logical deductions to make decisions; remains calm in stressful situations; and recognizes opportunities for improvement.

Your Role

You are Casey Jones, you have been assigned to an OERG project with one of the second year students, Sunny Austin. You were excited for the project since this is your fist time working with a second year. You looked forward to learning a lot from the experience by working with Sunny.

Few weeks ago, you had your first meeting together with the program director, Dan, and Sunny. This meeting reviewed the needs of the clients and the things you and Sunny needed to do on the project. It was a very productive meeting. You were expecting the second meeting with Sunny to distribute the duties, but this second meeting never came. You never tried to give Sunny a call, because you had been caught up with schoolwork. You thought Sunny might be in the same situation. Just yesterday, there was a social gathering and you were talking to Dan about the project. Dan told you that Sunny did a great job on the project. He/she pretty much did everything for you, and the project is almost done now. You were very shocked when you heard the news, and you are disappointed that Sunny excluded you from the project. In addition, you are frustrated that Sunny did not trust you to be able to contribute to the project.

You feel like there is a need to talk to Sunny. You want to know why he/she excluded you from the project. You also want to let Sunny know that if there are more opportunities in the future, you two will be able to work together as a team.

Role-player Information

Your Role

You are Sunny Austin, a second year student in the program. You have been assigned to an OERG project with one of the first year students, Casey Jones. A few weeks ago you, Casey and the director of the program had a meeting about the direction of the project. The meeting went very well and you knew clearly what you needed to do for the project. You were supposed to do the project together with Casey, but you two never set up the second meeting.

Ever since being an undergraduate, you were always doing things on your own and this characteristic has followed you to this master's program. After the meeting you started doing all the work that need to be done by yourself. After all, it is in your nature not to think of cooperation first--you think that if you can finish the work faster and more appropriately by yourself, why not! To you, it is the result that matters, not the process.

You just received Casey's phone call that said he/she wants to have a meeting with you about the project. This makes you realize that you did not include Casey in the project at all. Now you feel a bit sorry for Casey, but you are who you are, nothing is going to change.

Observer Information

This is a role-play exercise. In this exercise, participants are asked to portray the role of a project team member who just realized the team leader, one of the second years, has finished the project without including him/her. Participants are expected to read through the scenario gathering as much information as they can. The participant's goal in this role-play is to pass along his/her thoughts to the second year.

You role as an observer is to judge participant's behavior based on three dimensions: **building relationships**, **communication, and personal effectiveness**. Competencies important for building relationships include the following: Seeks to understand the perspective of people with different opinions; treats others with respect; positively influences others' attitudes and behaviors; effectively deals with conflicts among peer and in group; offers assistance to other students when needed; and displays interests in people. Competencies important for effective communication include the following: Communicates clearly, fluently, and succinctly; actively listens to others; freely exchanges knowledge, ideas and experience to fellow students; orally communicates facts to others; gathers facts from written materials; recalls details reading, listening, or talking; and obtains facts from others through oral communication. Competencies important for personal effectiveness are

seeks to perform beyond expectations of his/her role; uses logical deductions to make decisions; remains calm in stressful situations; and recognizes opportunities for improvement.

Dimensions and Competencies used in the exercise

Building Relationship	Seeks to understand the perspective of people with different opinions
	Treats others with respect
	Positively influences others' attitudes and behaviors
	Effectively deals with conflicts among peers and in group
	Offer assistance to other students when needed
	Display interests in people
Communication	Communicates clearly, fluently, and succinctly
	Actively listens to others
	Freely exchange knowledge, ideas and experiences to fellow students
	The ability to orally communicate facts to others
	The ability to gather facts from written materials
	Able to recall details reading, listening, or talking
	The ability to obtain facts from other through oral communication
Personal effectiveness	Seeks to perform beyond expectations of his/her role
	Uses logical deductions to make decisions
	Remains calm in stressful situations
	Recognizes opportunities for improvement

Appendix 8
Assessment Center Exercise- Presentation

Participant Information

In this exercise you will be asked to present your results from the group exercise. You will have 20 minutes to prepare your presentation, and another 15 minutes to present to the judges. You can use any kind of resources that will help your presentation.

You will be judged based on three dimensions: **leadership, communication, and personal effectiveness.** Competencies in leadership are earns others' trust and respect; admits mistakes and quickly corrects them; demonstrates energy and enthusiasm for the project; and displays confidence and certainty. Competencies in communication are communicates clearly, fluently, and succinctly; actively listens to others; freely exchange knowledge, ideas and experiences with others; writes clearly-formatting ideas in a concise, understandable way; the ability to orally communicate facts to others; and able to recall details from reading listening, or talking. Competencies in personal effectiveness are seeks to perform beyond expectations of his/her role; uses logical deductions to make decisions; remains calm in stressful situations; exhibits the ability to work in an ambiguous environment; the ability to make the best judgment in a timely manner; and displays good ethics.
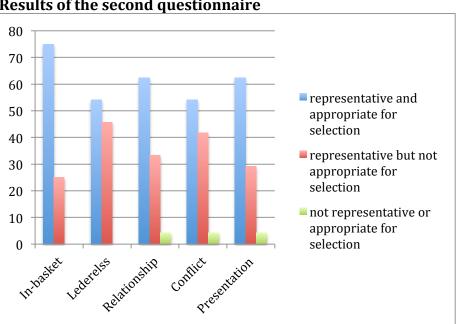
Observer Information

This is a presentation exercise, participants are asked to conduct a presentation about the results they have from the leaderless group discussion exercise. Please notice that this exercise is not focusing only on participants' presentation skills, instead, it is focusing on three competencies: **leadership, communication, and personal effectiveness**.

Competencies in leadership are earns others' trust and respect; admits mistakes and quickly corrects them; demonstrates energy and enthusiasm for the project; and displays confidence and certainty. Competencies in communication are communicates clearly, fluently, and succinctly; actively listens to others; freely exchange knowledge, ideas and experience with others; writes clearly-formatting ideas in concise, understandable way; the ability to orally communicate facts to others; and able to recall details from reading, listening, or talking. Competencies in personal effectiveness are seeks to perform beyond expectations of his/her role; uses logical deductions to make decisions; remains calm in stressful situation; exhibits the ability to work in an ambiguous environment; the ability to make the best judgment in a timely manner; and displays good ethics.

Dimensions and Competencies used in the Exercise

Leadership	Earns other's trust and respect
	Admits mistakes and quickly corrects them
	Demonstrates energy and enthusiasm for the project
	Displays confidence and certainty
Communication	Communicates clearly, fluently, and succinctly
	Actively listens to others
	Freely exchange knowledge, ideas and experiences with others
	Writes clearly-formatting ideas in a concise, understandable way
	The ability to orally communicate facts to others
	Able to recall details from reading, listening, or talking
Personal effectiveness	Seeks to perform beyond expectations of his/her role
	Uses logical deductions to make decisions
	Remains calm in stressful situations
	Exhibits the ability to work in an ambiguous environment
	The ability to make the best judgment in a timely manner
	Displays good ethics

Appendix 9

Results of the second questionnaire